US005880853A

United States Patent [19]

Hillberg

[11] **Patent Number: 5,880,853**

[45] **Date of Patent: Mar. 9, 1999**

[54] **METHOD AND DEVICE AT AN EQUIPMENT FOR TELEMESSAGES**

[76] Inventor: **Arne Hillberg**, Ruddamsgaten 7, S-803 20 Gayle, Sweden

[21] Appl. No.: **929,107**

[22] PCT Filed: **Feb. 2, 1994**

[86] PCT No.: **PCT/SE94/00077**

§ 371 Date: **Aug. 1, 1995**

§ 102(e) Date: **Aug. 1, 1995**

[87] PCT Pub. No.: **WO94/18767**

PCT Pub. Date: **Aug. 18, 1994**

Related U.S. Application Data

[63] Continuation of Ser. No. 500,892, Aug. 1, 1995.

[30] **Foreign Application Priority Data**

Feb. 2, 1993	[SE]	Sweden	9300314
Feb. 9, 1993	[SE]	Sweden	9300408
Mar. 1, 1993	[SE]	Sweden	9300680
Aug. 16, 1993	[SE]	Sweden	9302648

[51] **Int. Cl.**[6] **B65B 11/48**

[52] **U.S. Cl.** **358/402**

[58] **Field of Search** 358/400, 402–403, 358/498, 500; 270/58.06; 271/2; 156/441.5, 442.1–442.2

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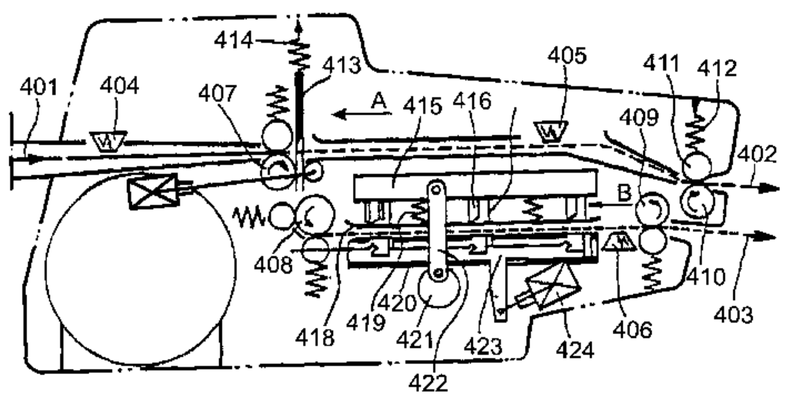
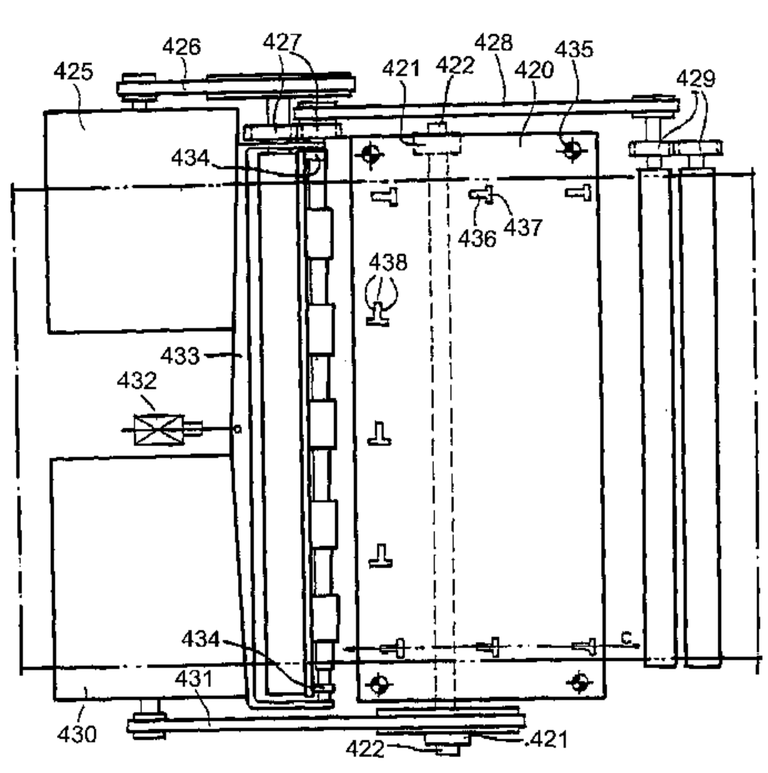
Primary Examiner—David K. Moore
Assistant Examiner—Stephen Brinich
Attorney, Agent, or Firm—Pollock, Vande Sande & Amernick

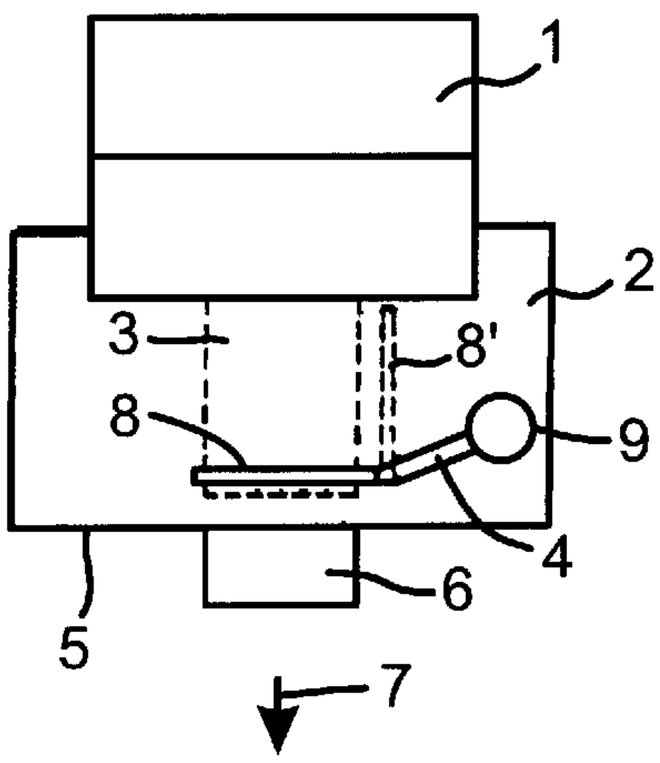
[57] **ABSTRACT**

An enveloping device for equipment which receives telemessages is provided. The equipment is arranged to print out the telemessages on a printout medium. Punching members and flap affecting members are arranged along three sides of the printout medium. The punching members punch out a flap in the printout medium and a recess adjacent to the flap. The flap affecting members take each outpunched flap into the adjacent recess forming a breakable closure thereby sealing the printout medium.

7 Claims, 17 Drawing Sheets







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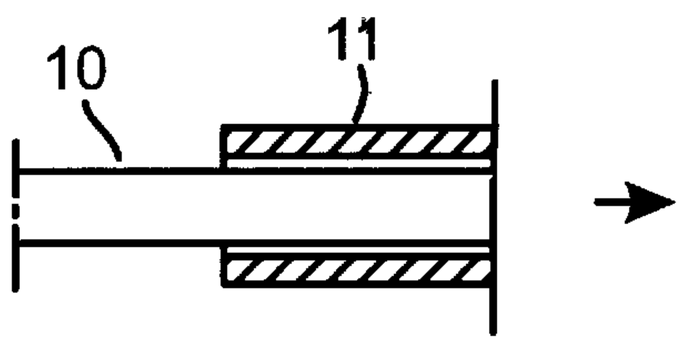

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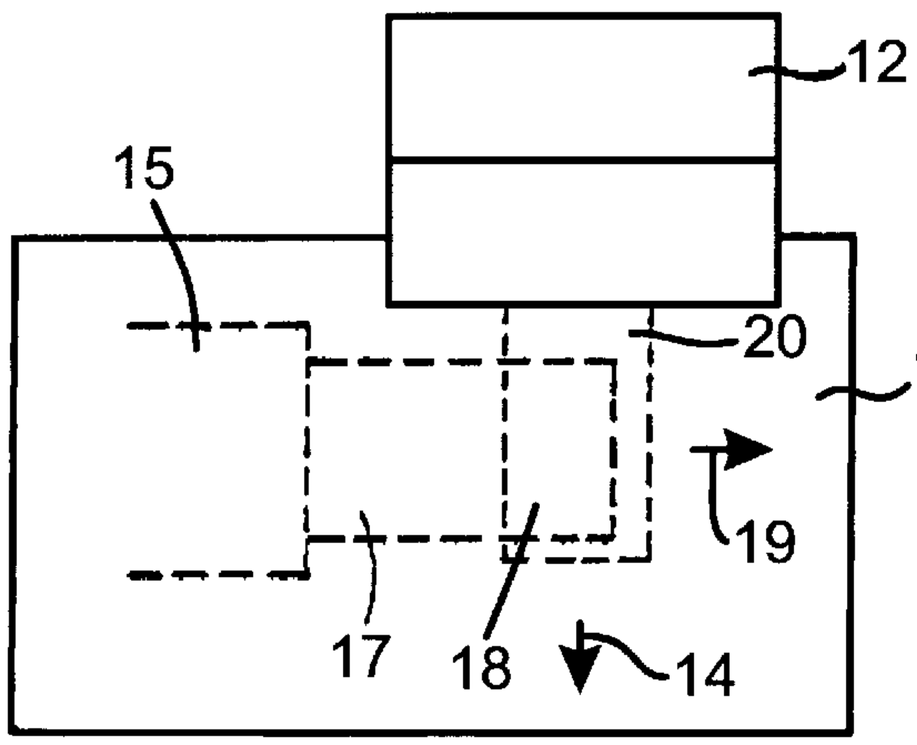

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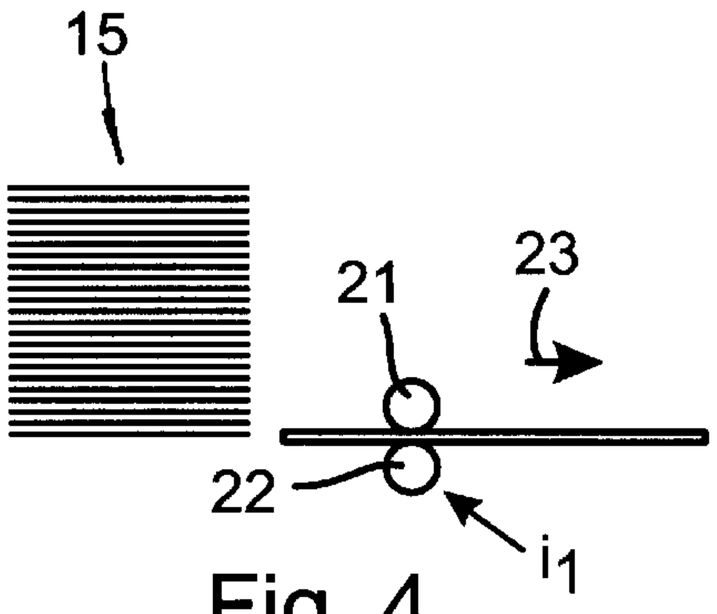

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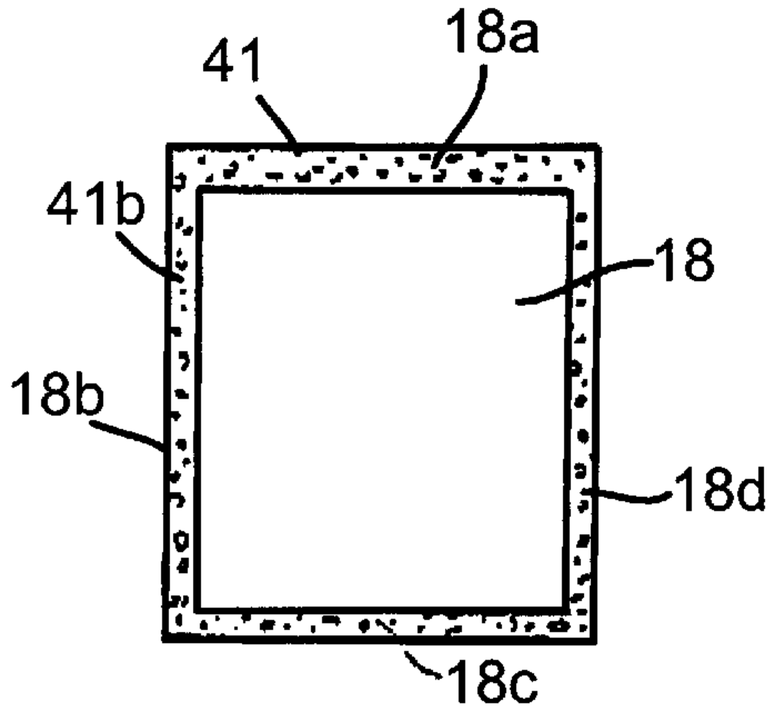

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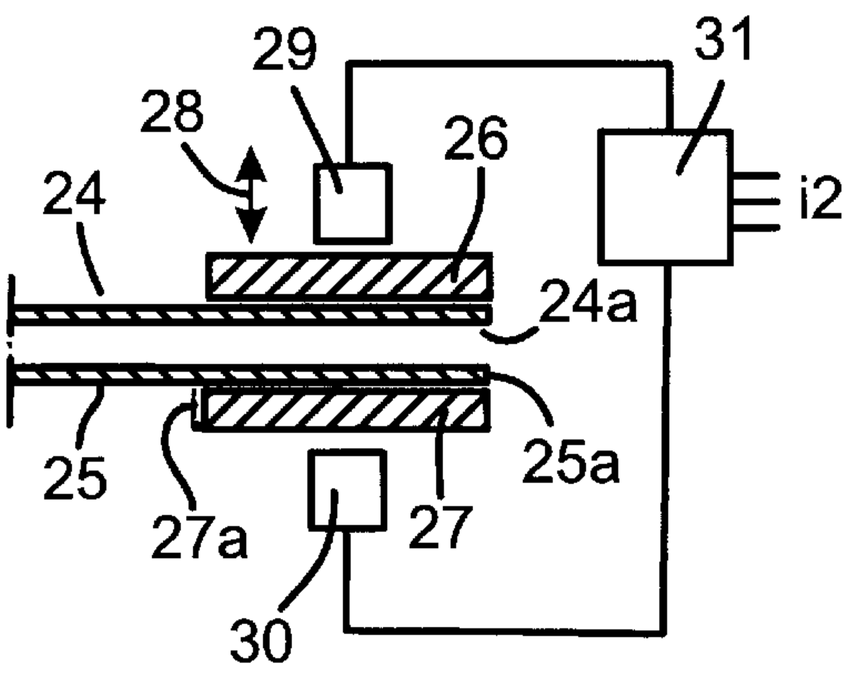

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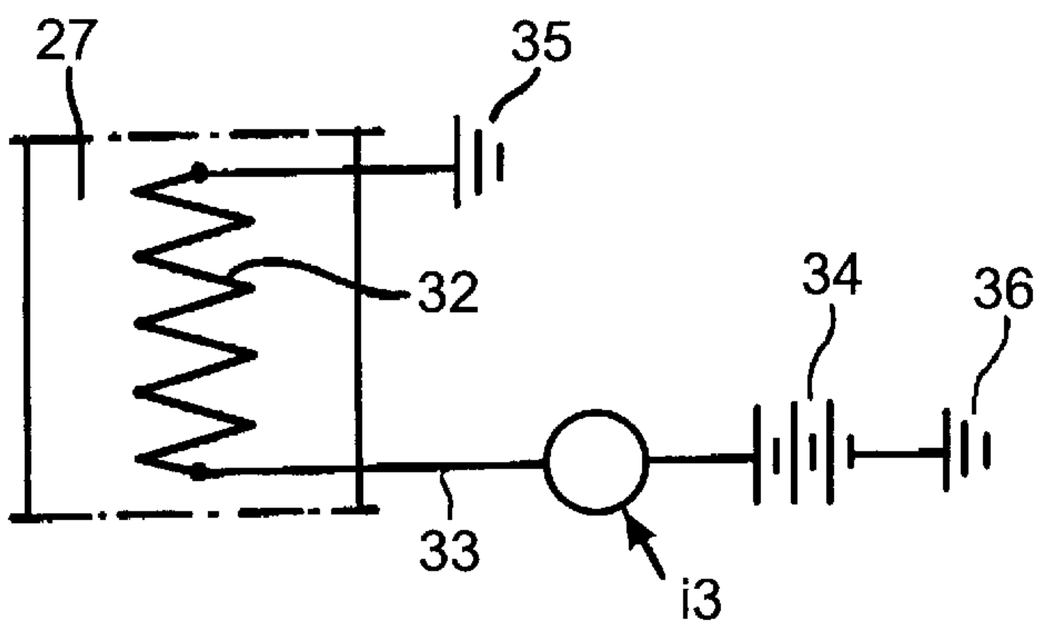

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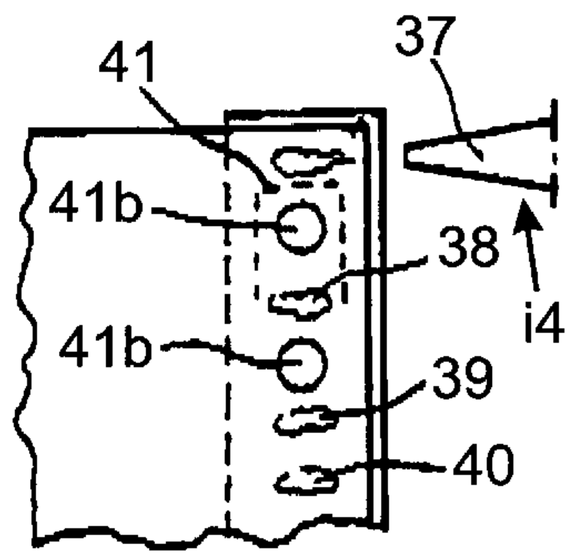

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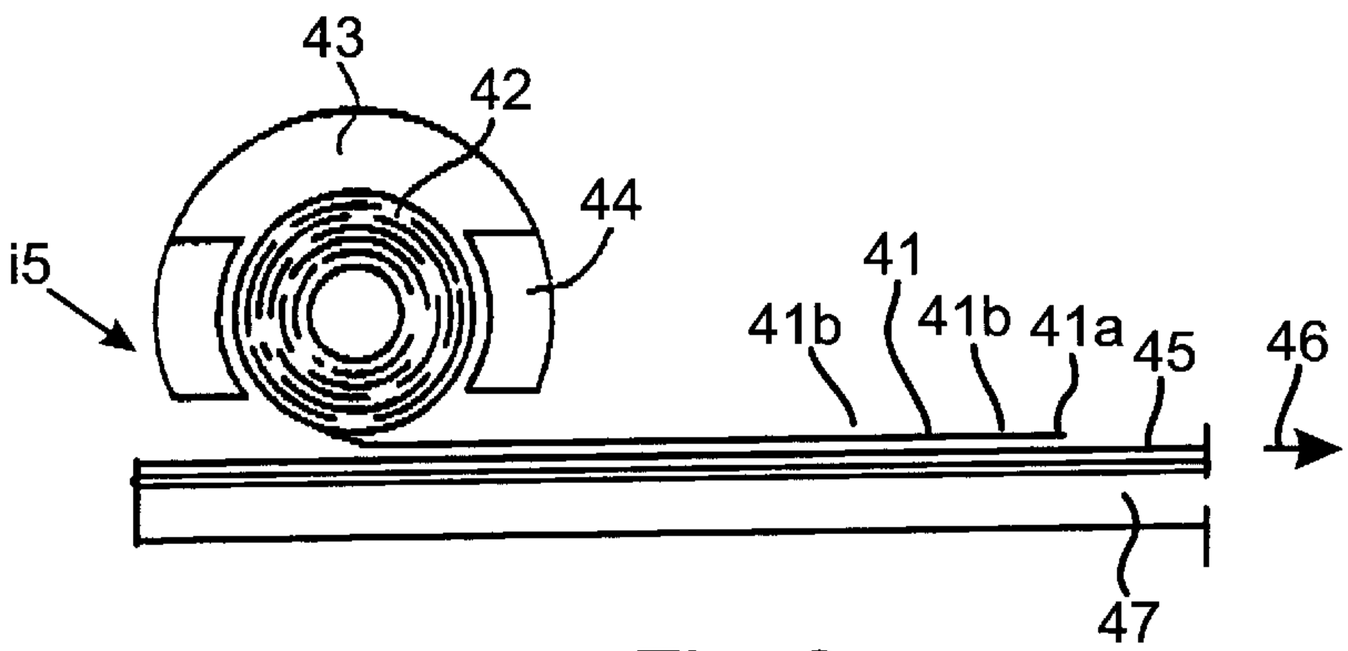

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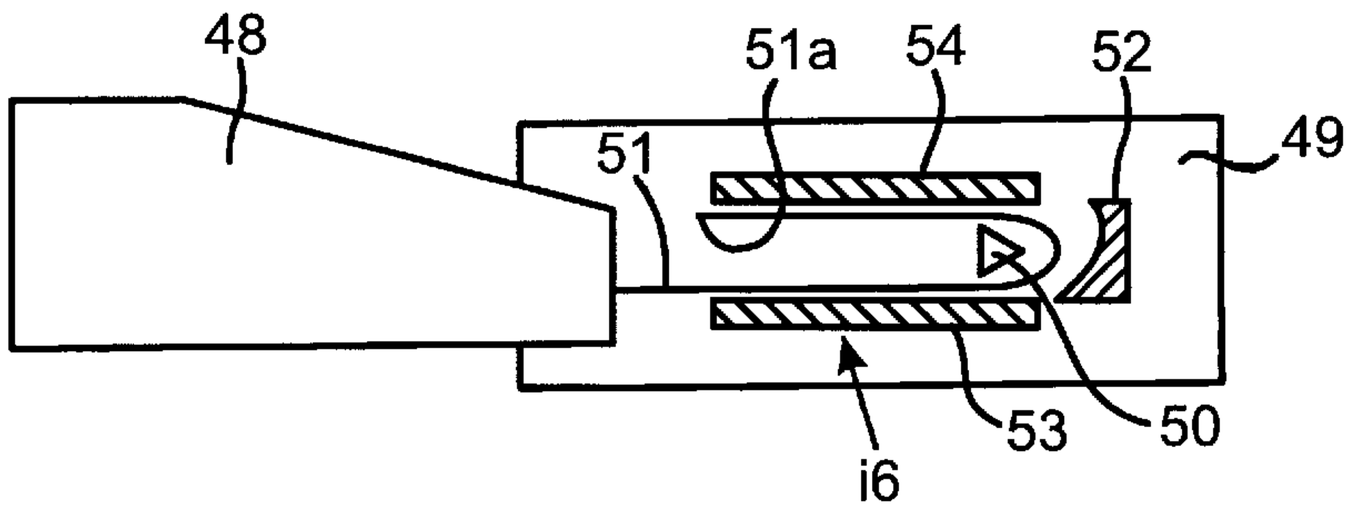

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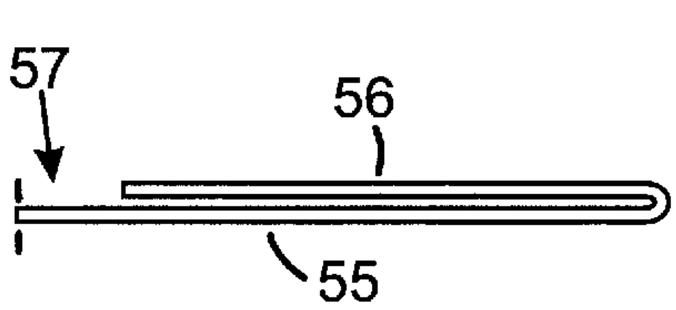

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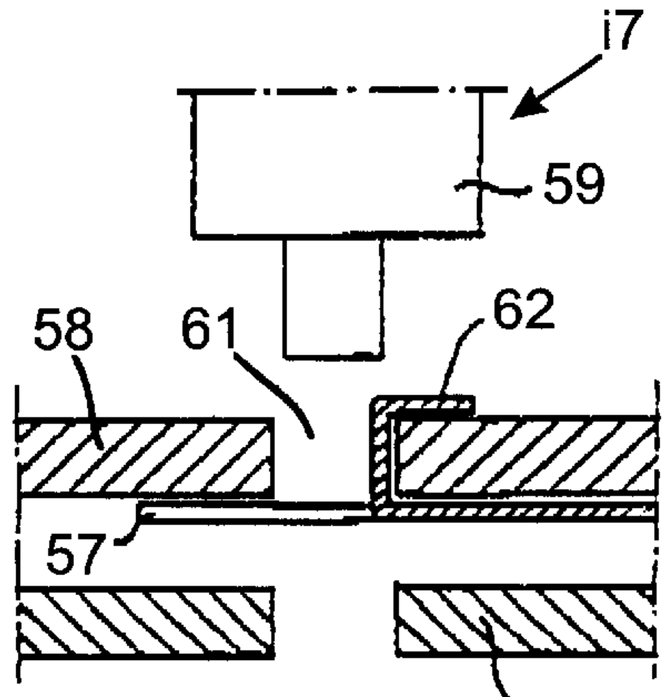

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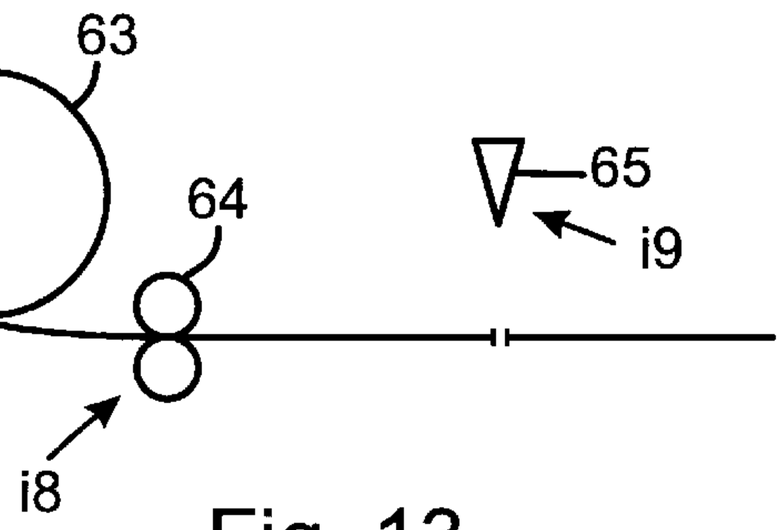

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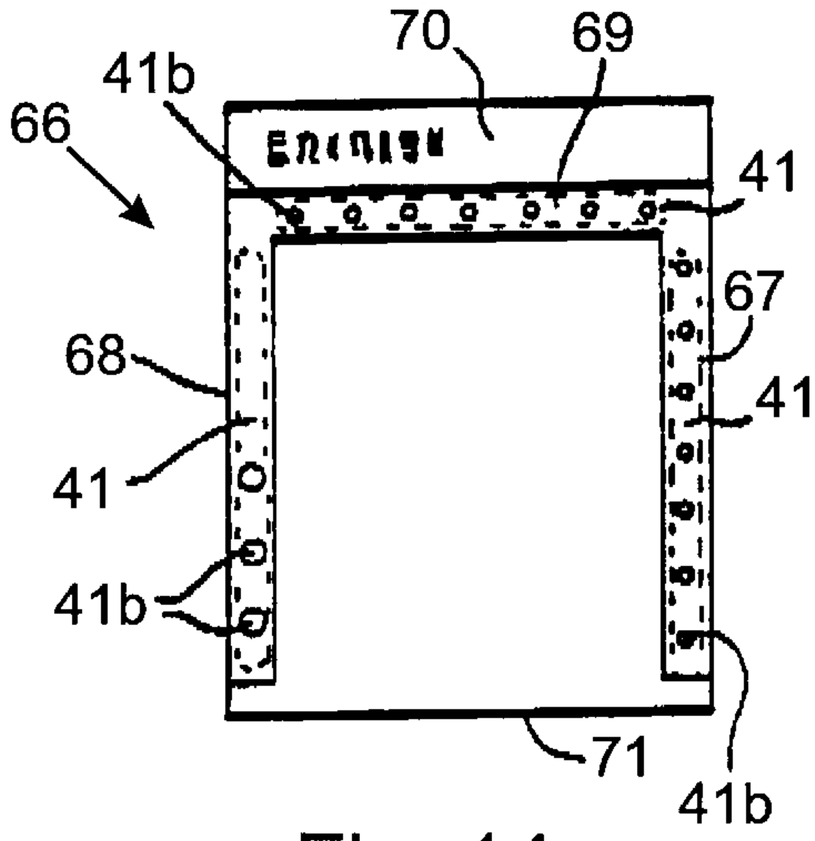

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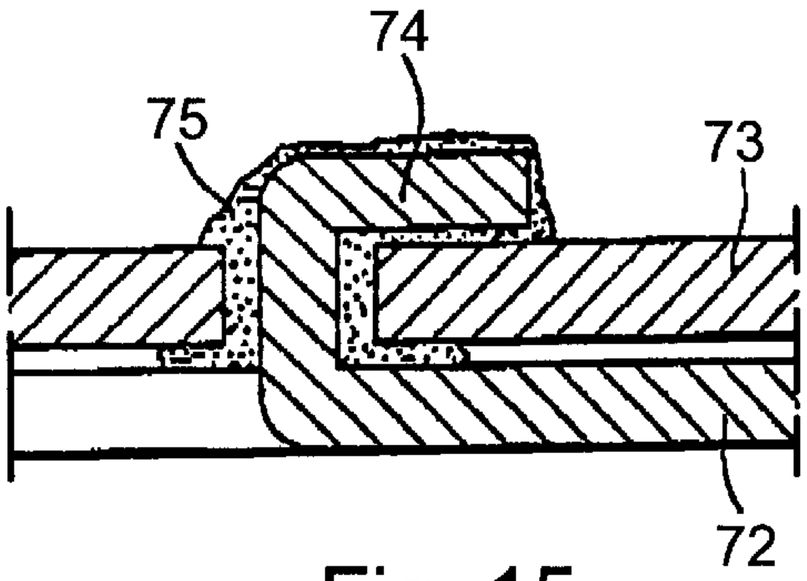

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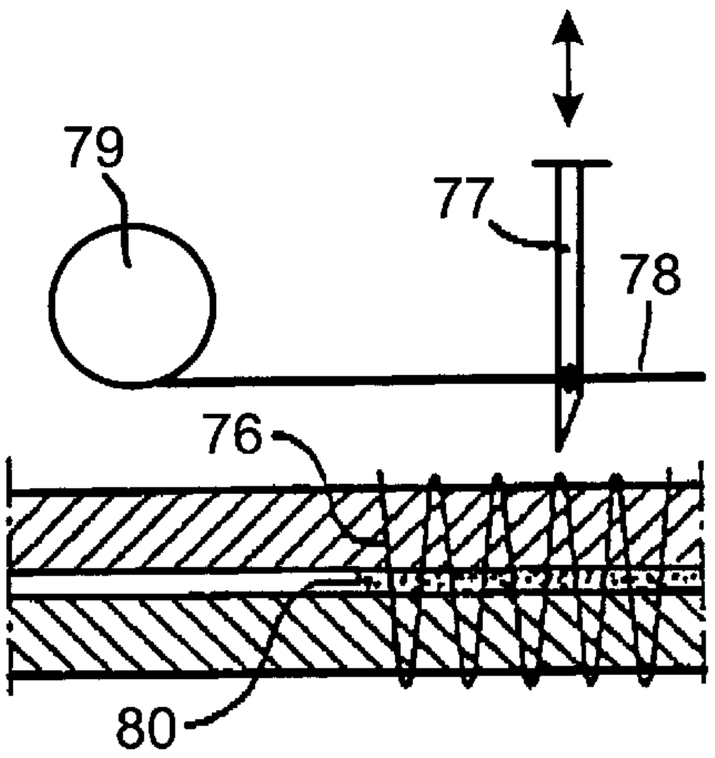

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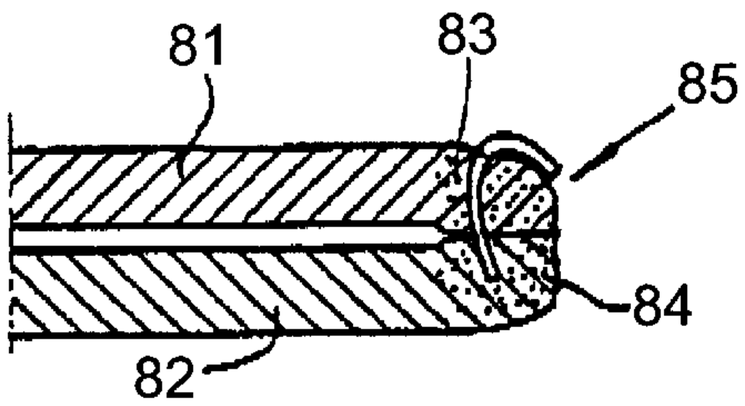

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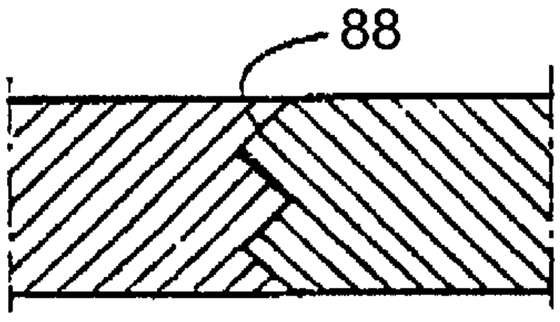

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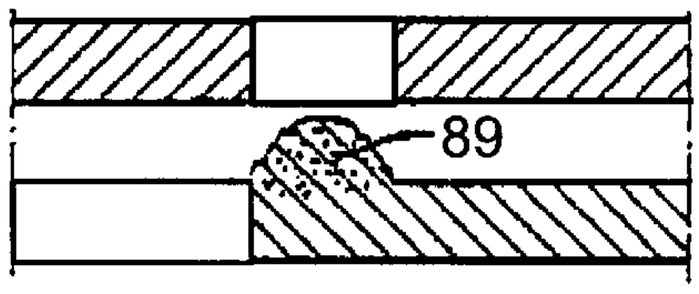

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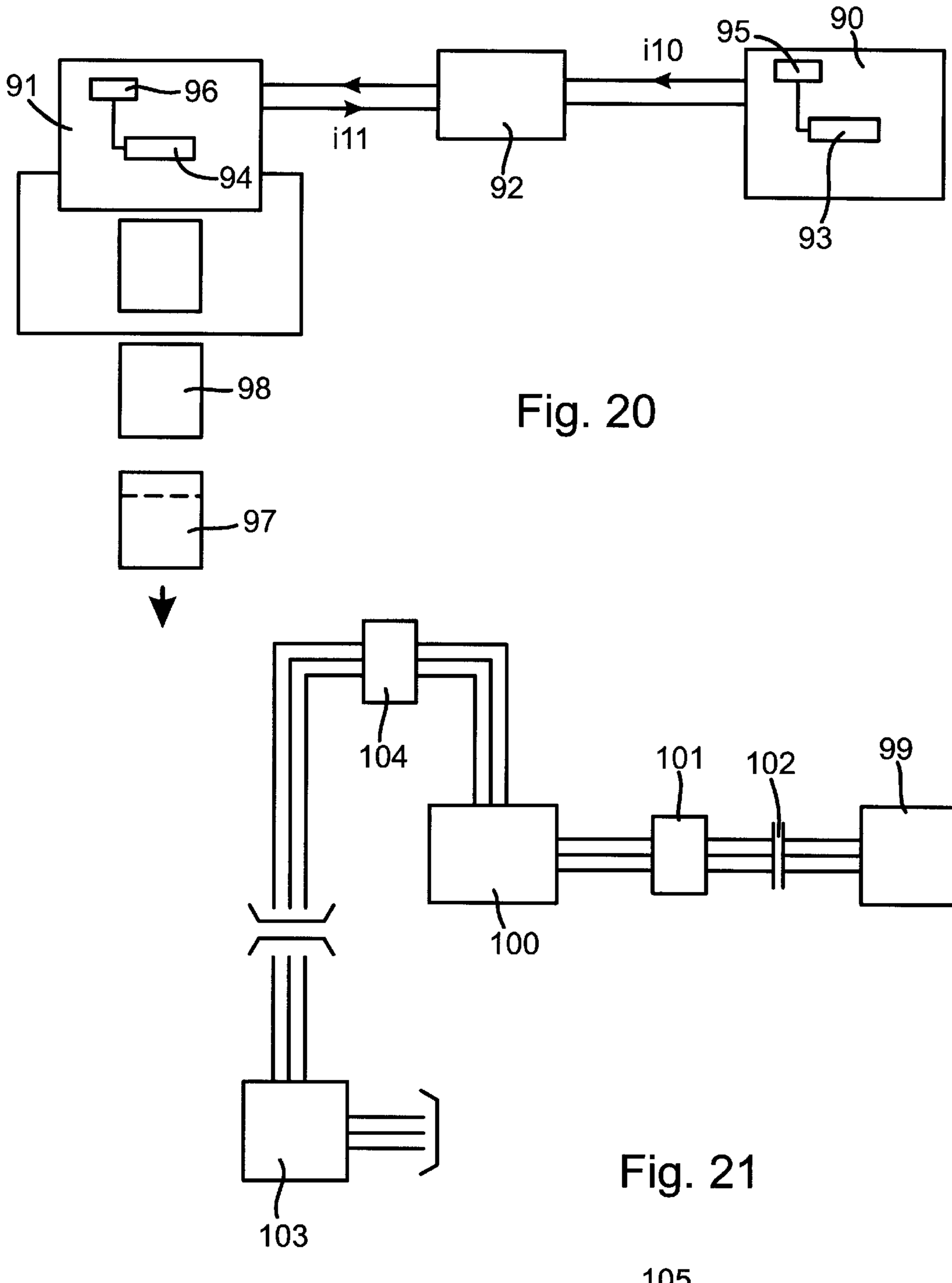
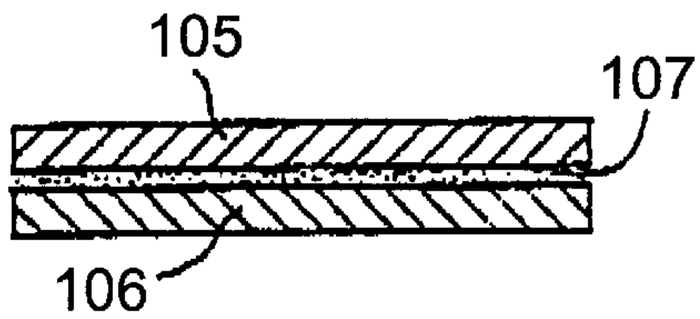


Fig. 20

Fig. 21



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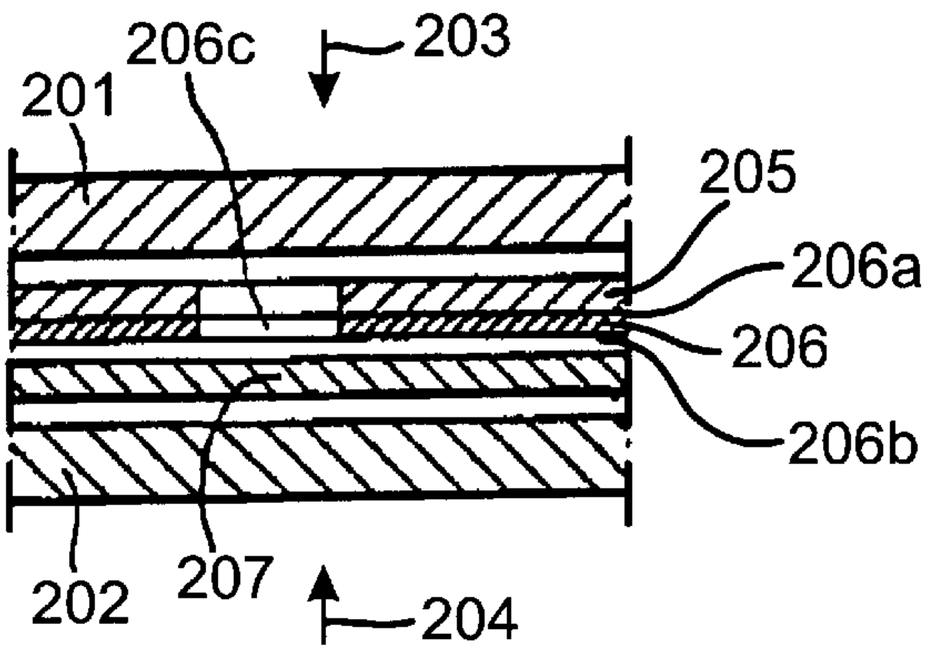

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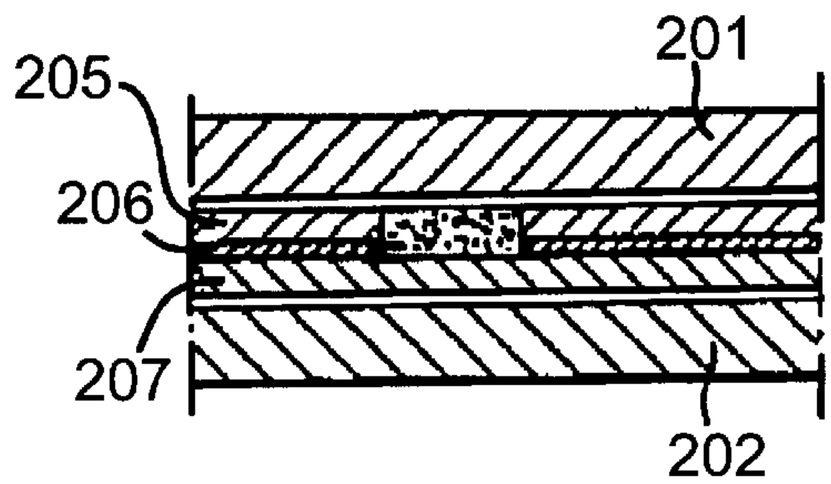

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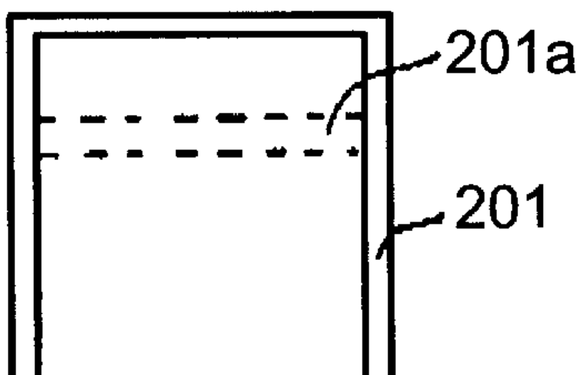

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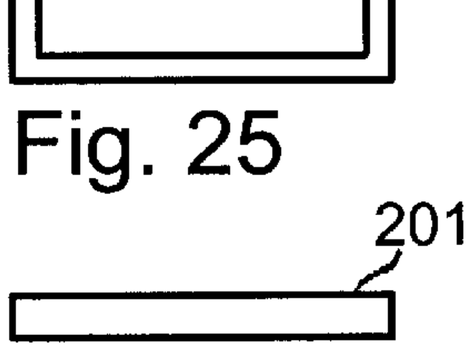

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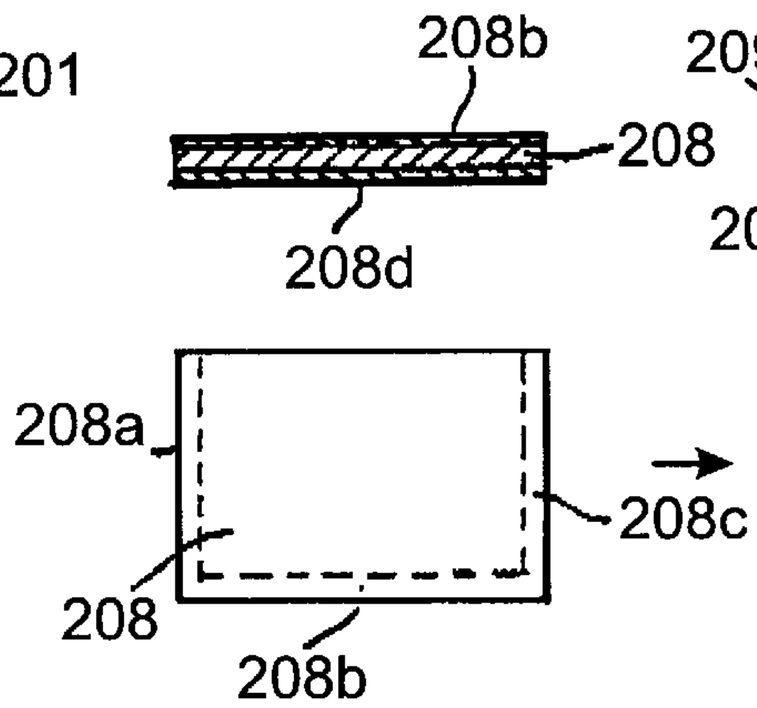

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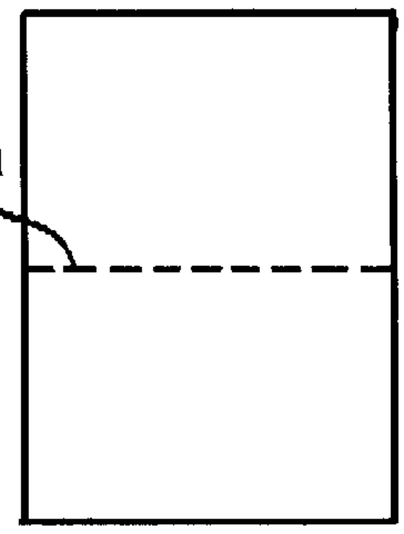

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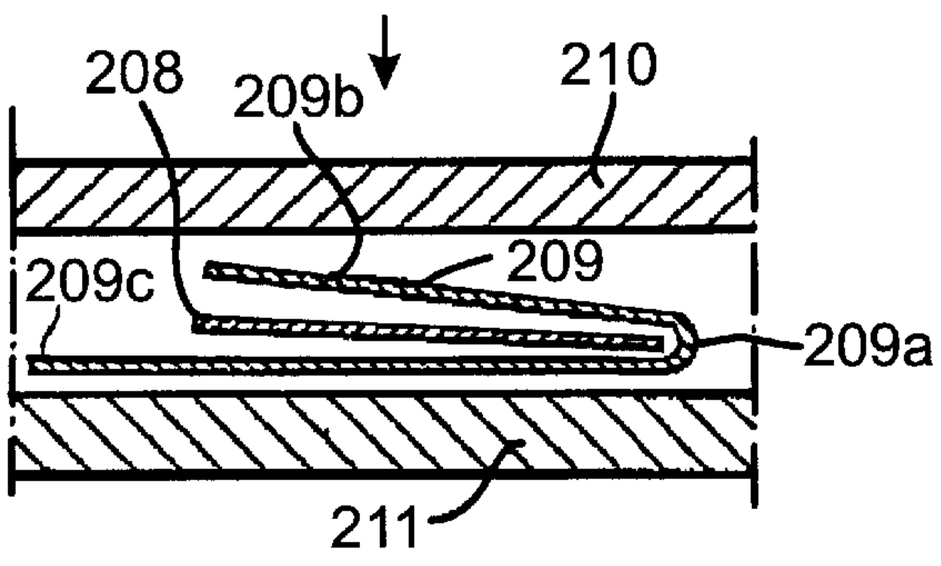

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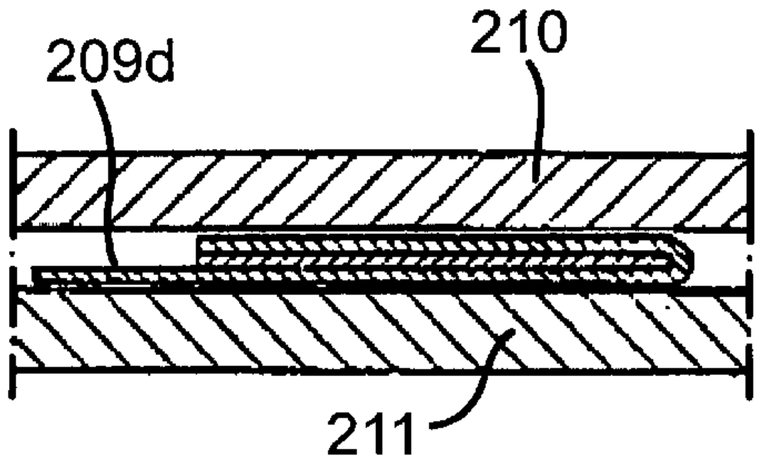

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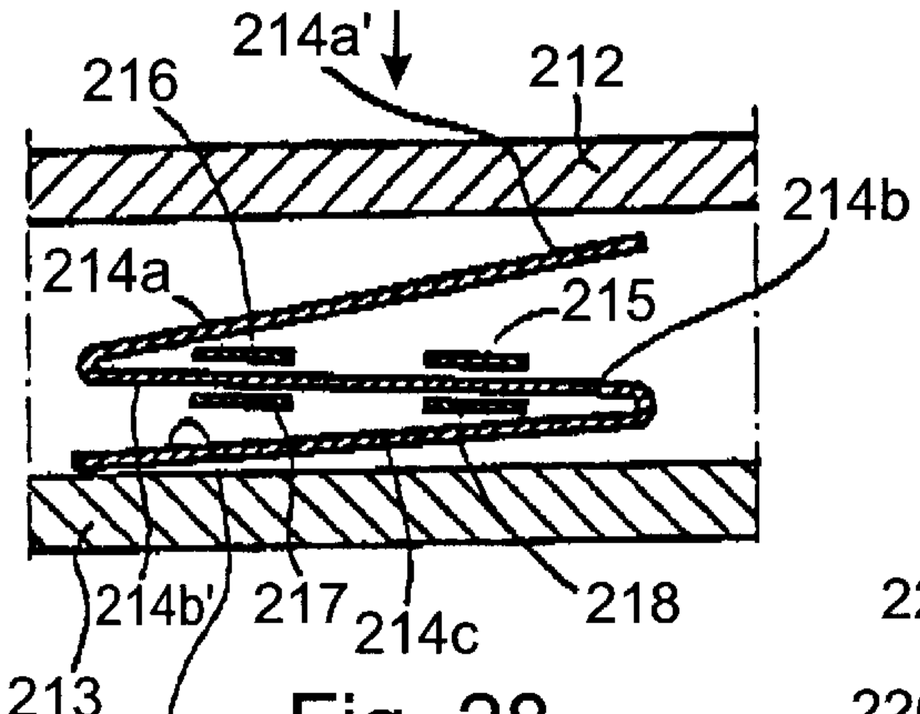

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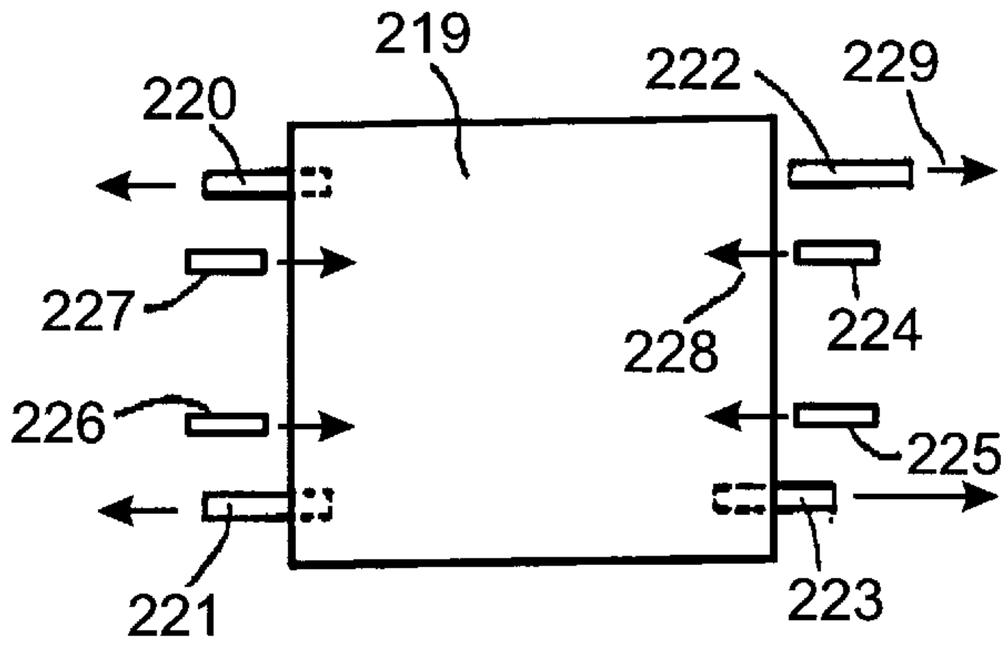

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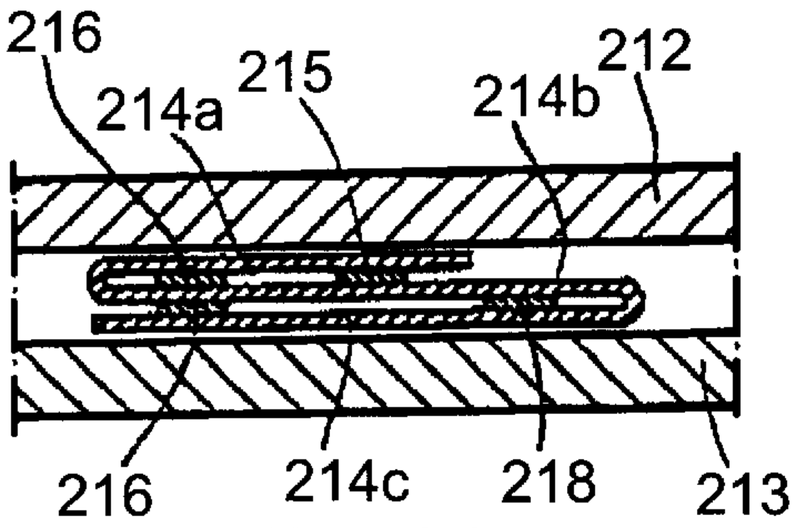

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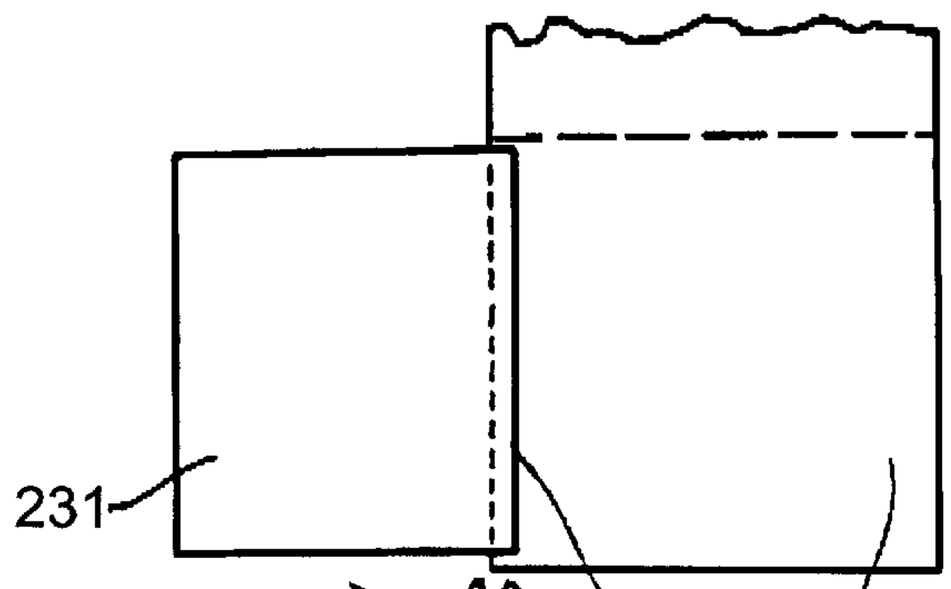

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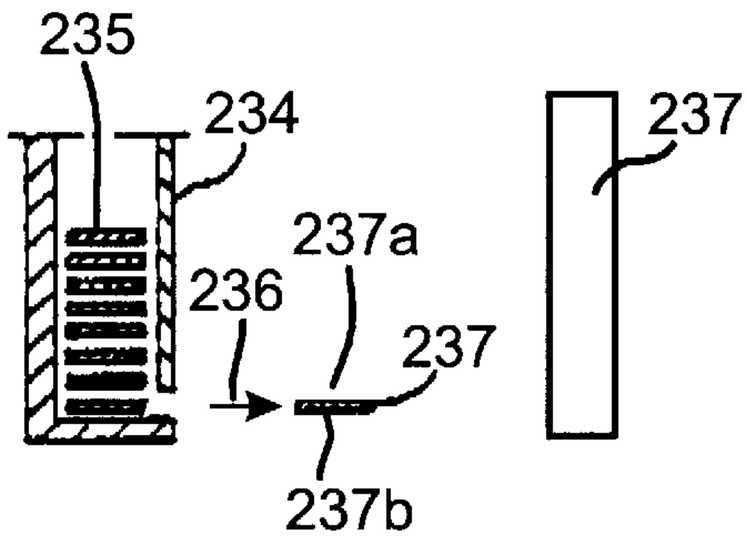
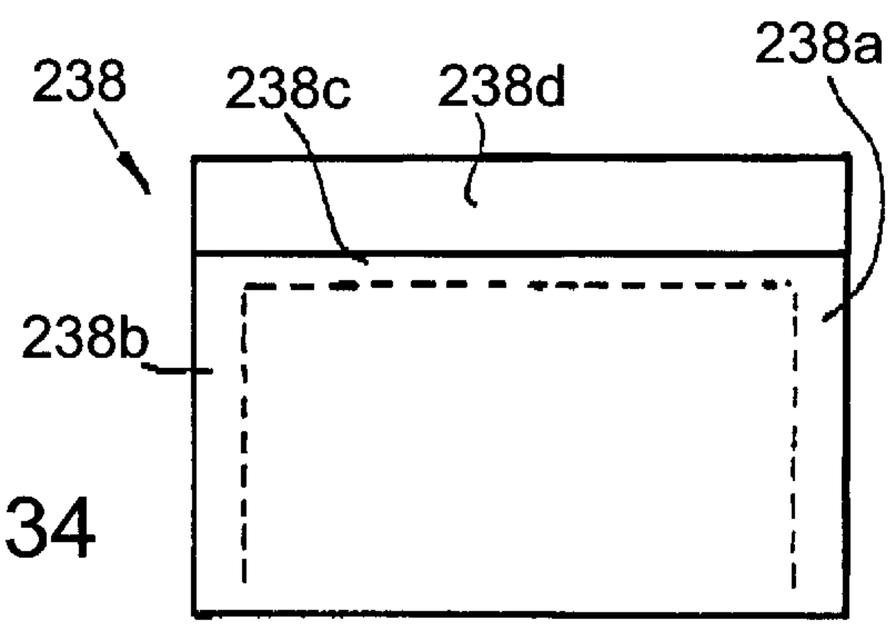


Fig. 32

Fig. 33



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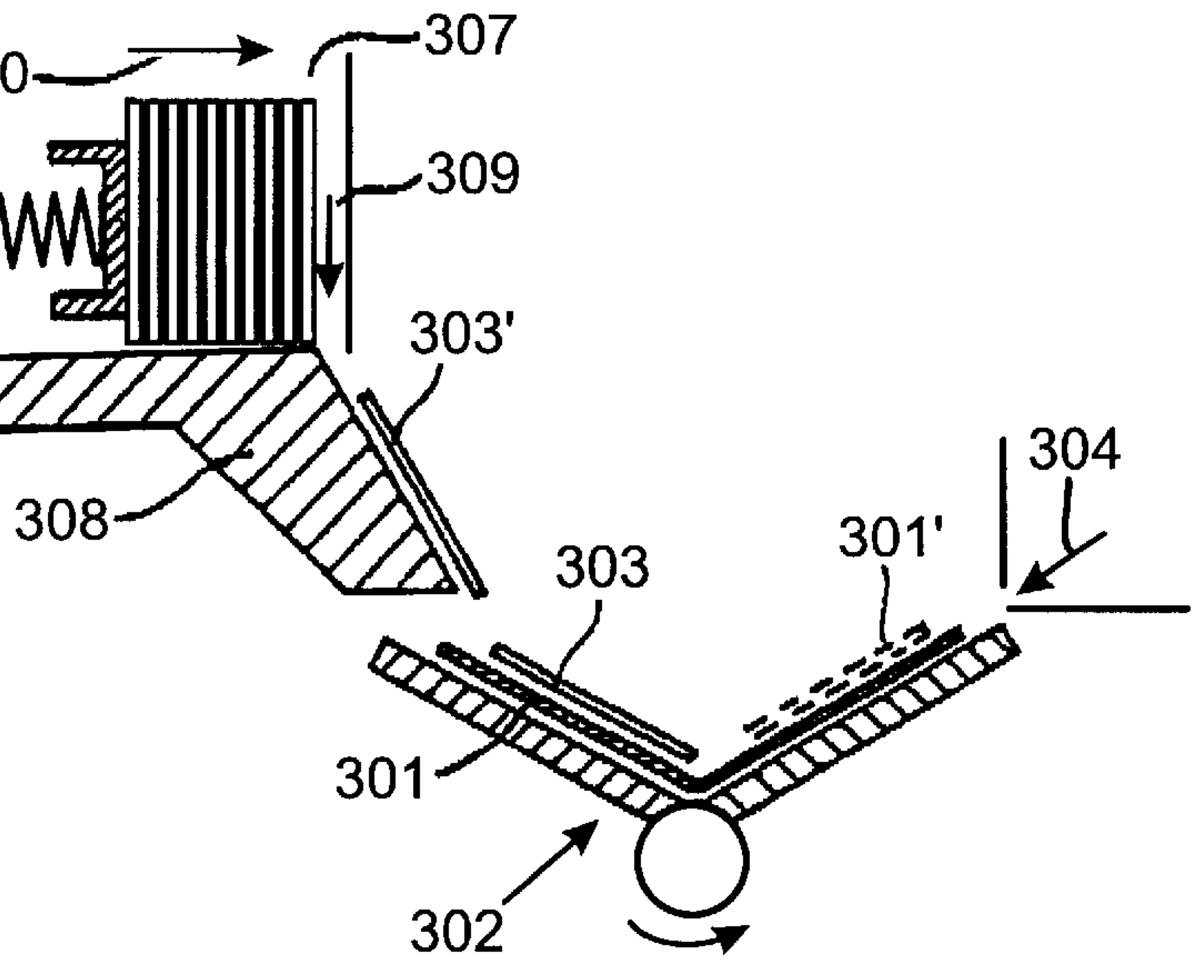

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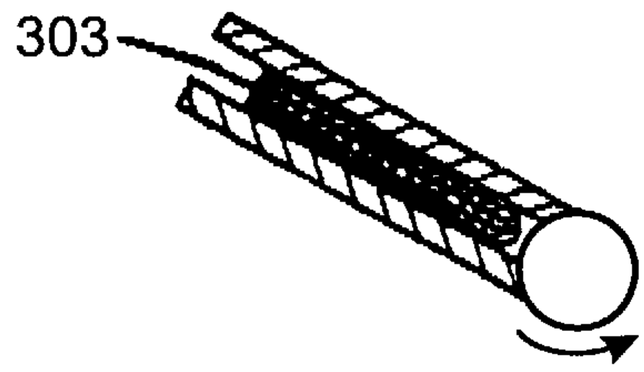

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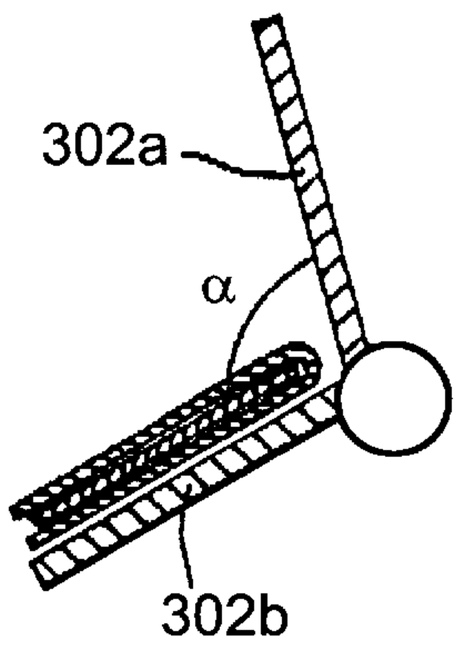

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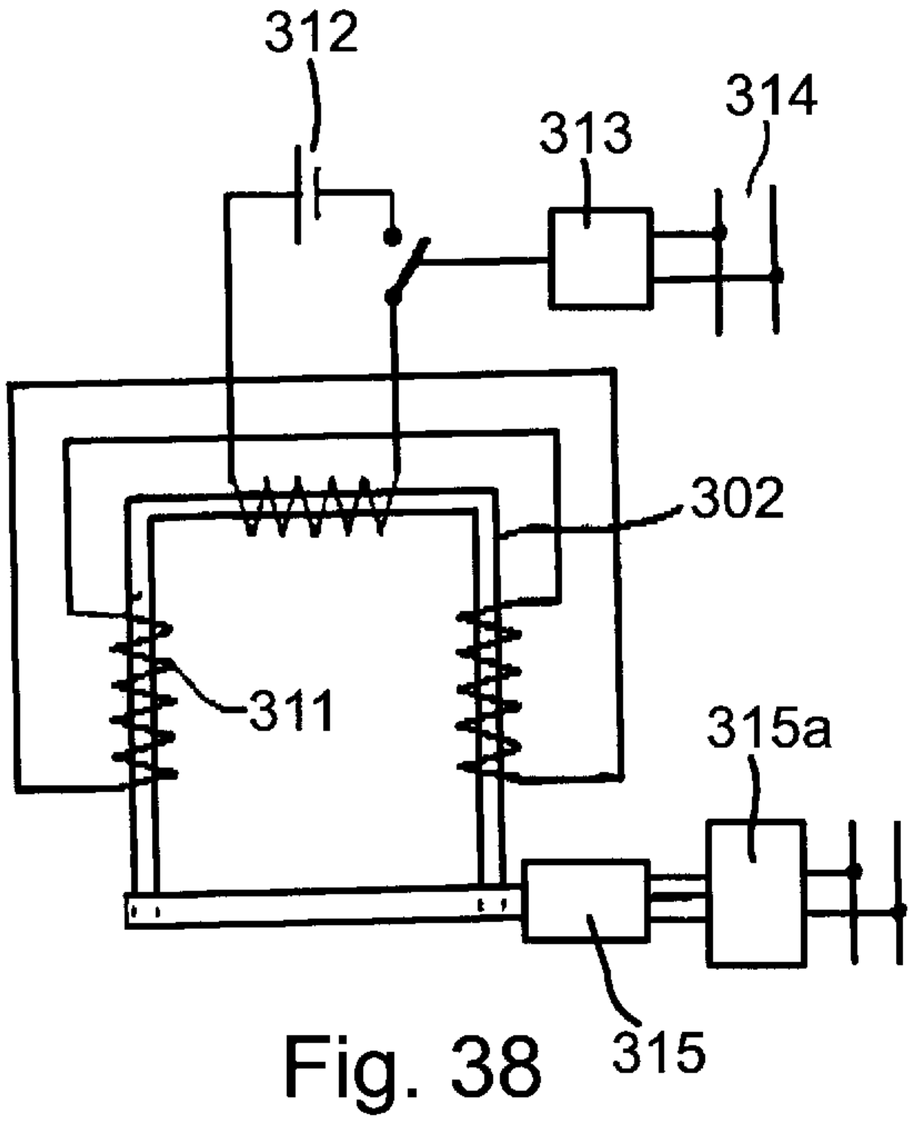

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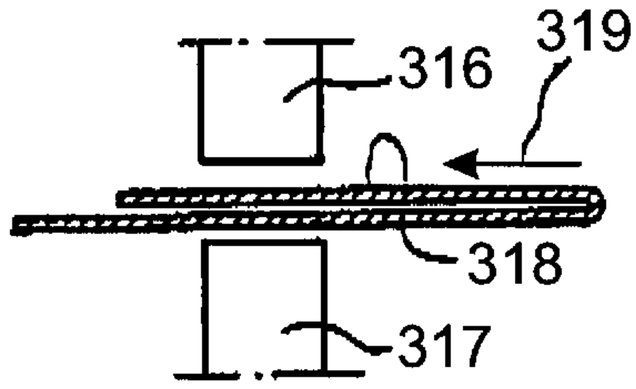

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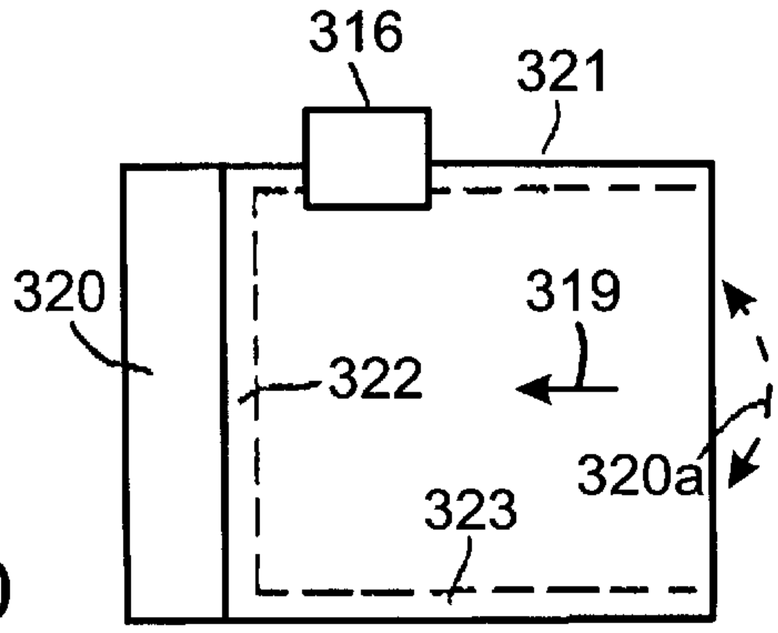

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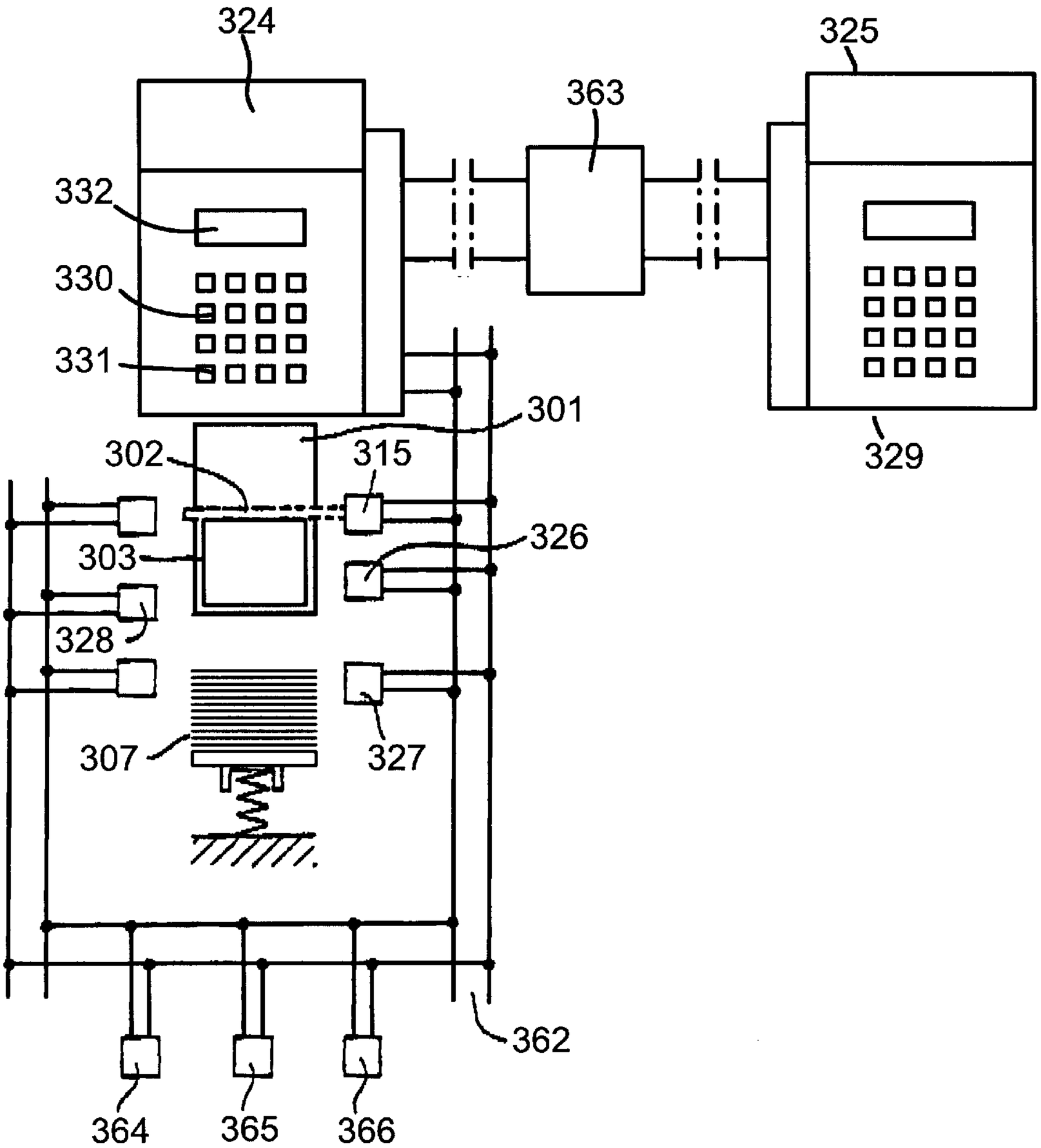
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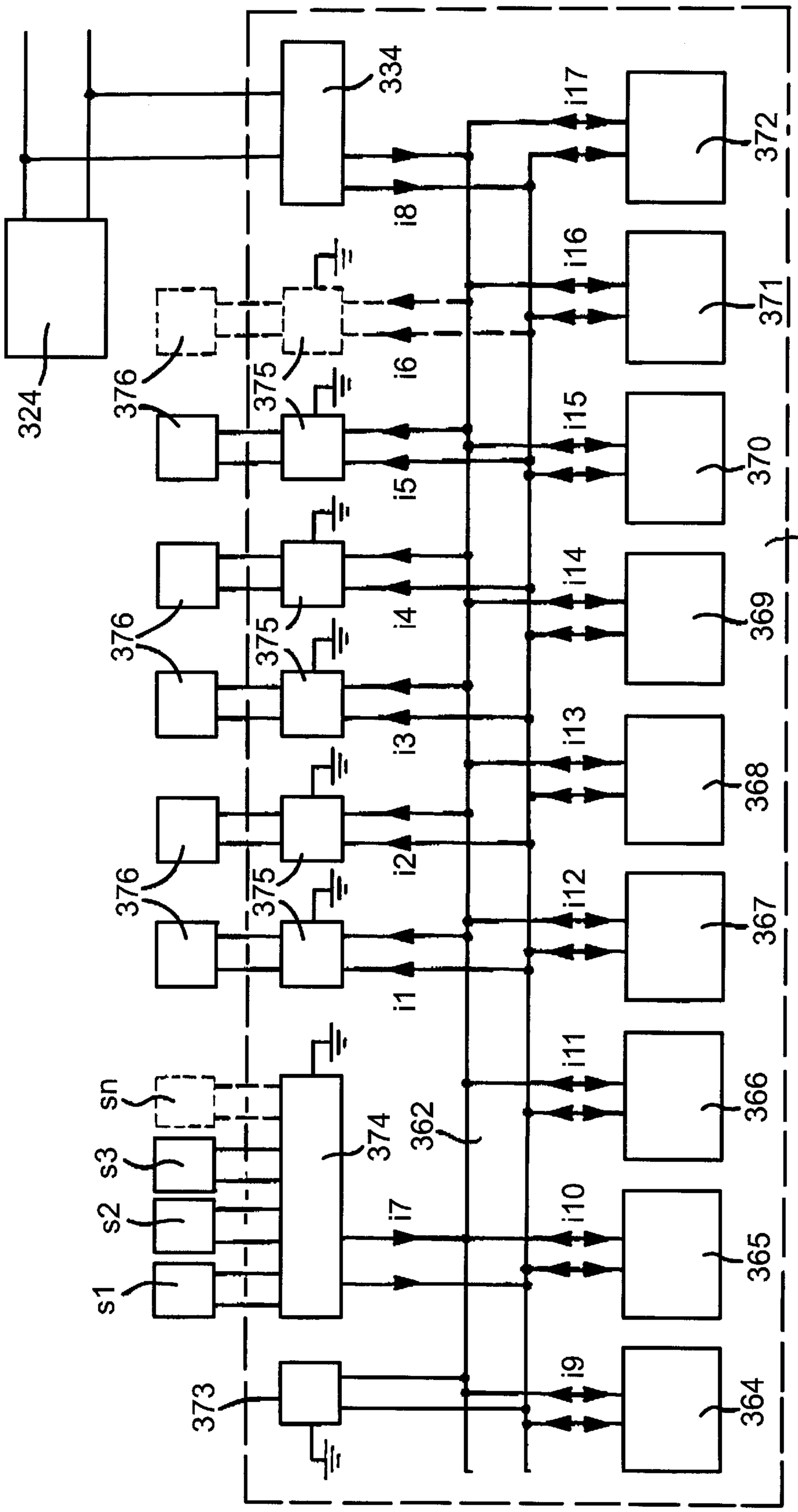
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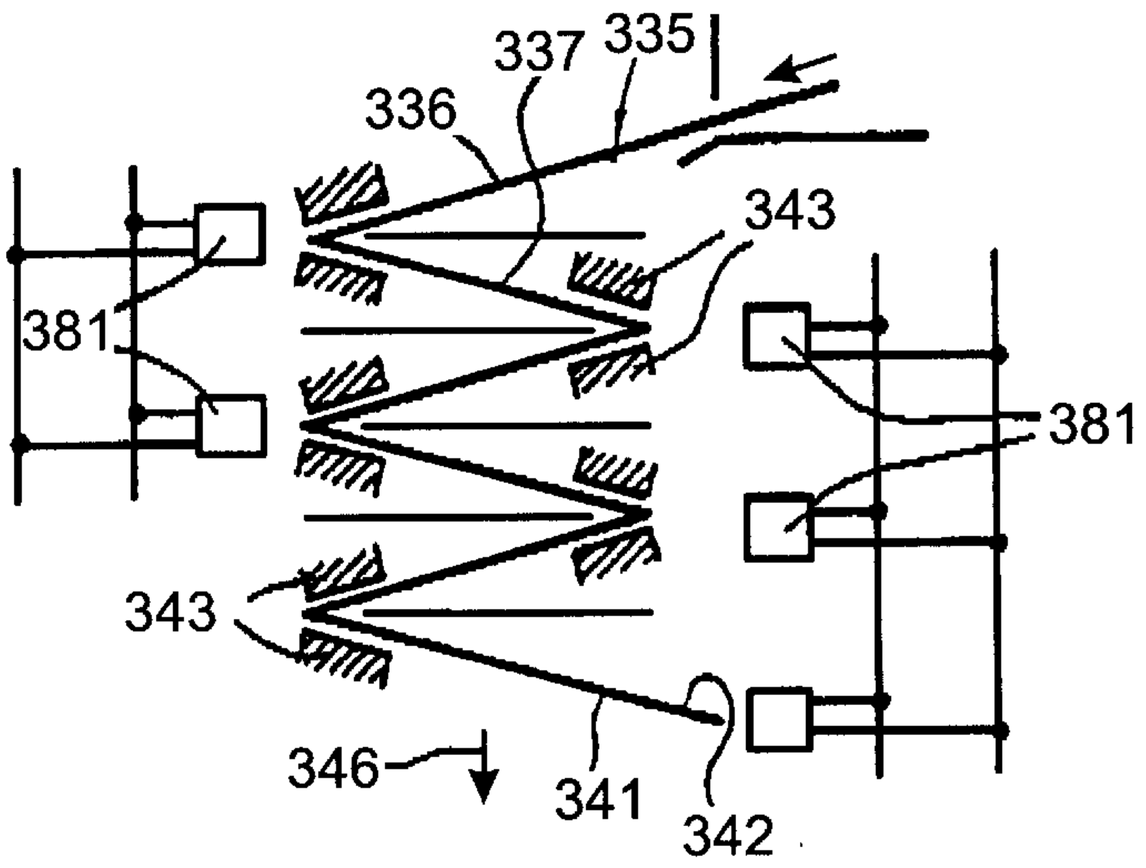
Fig. 42



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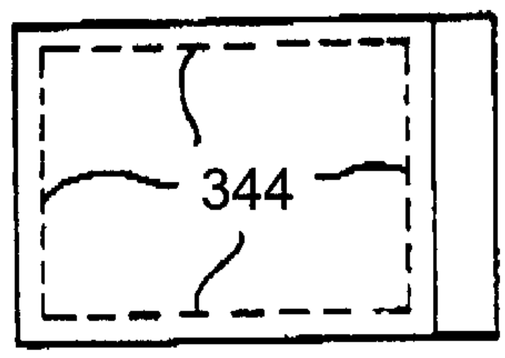

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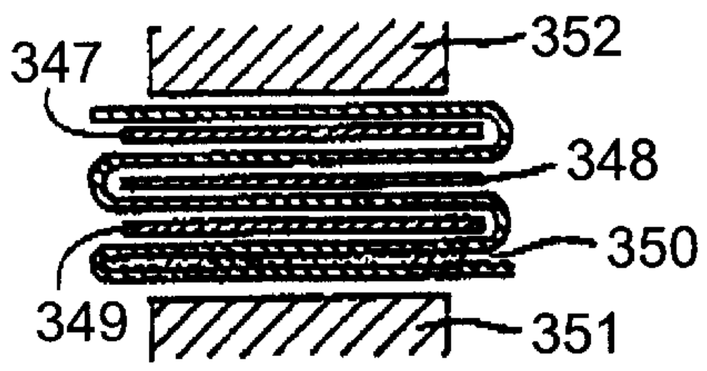

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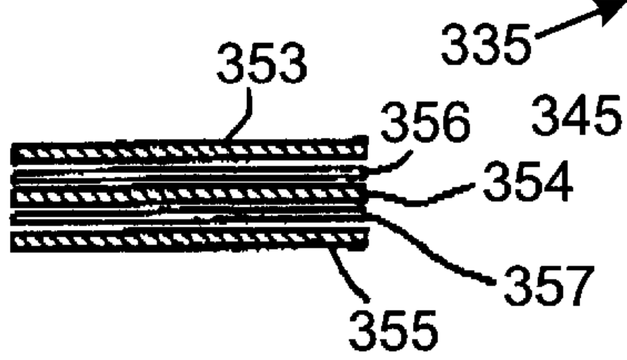

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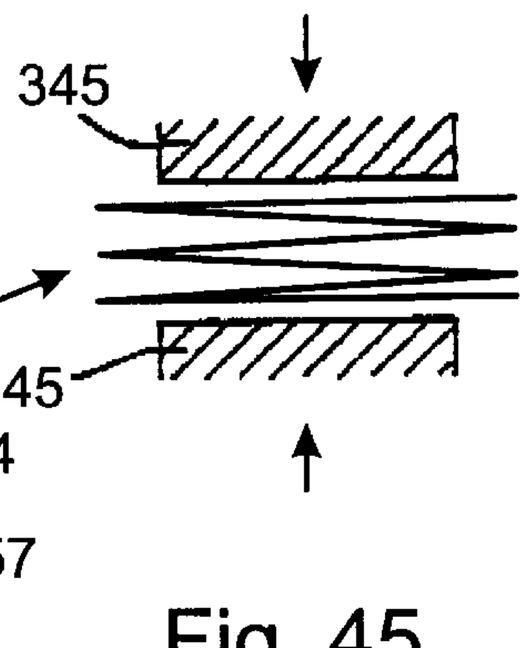

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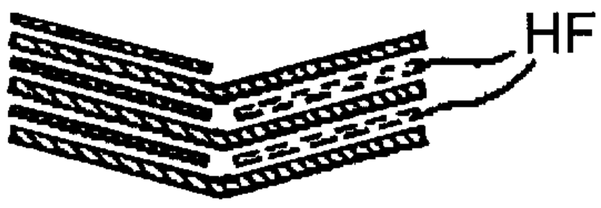

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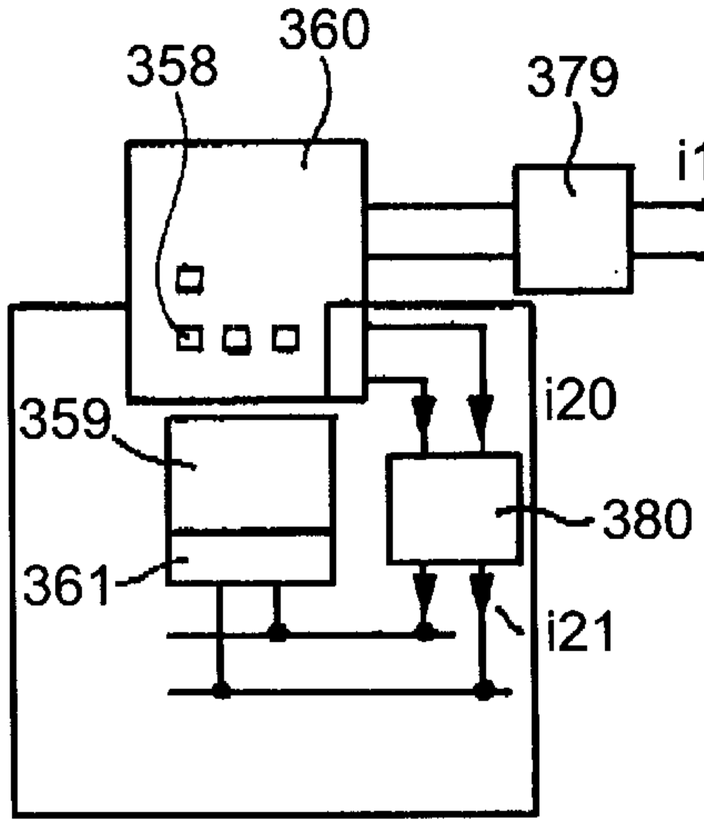

Fig. 49

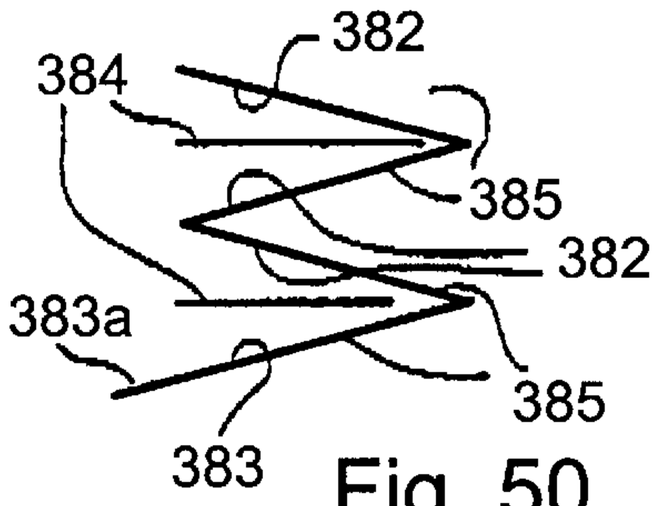

Fig. 50

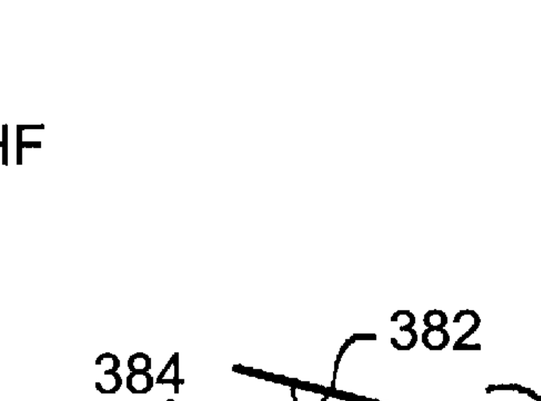

Fig. 51

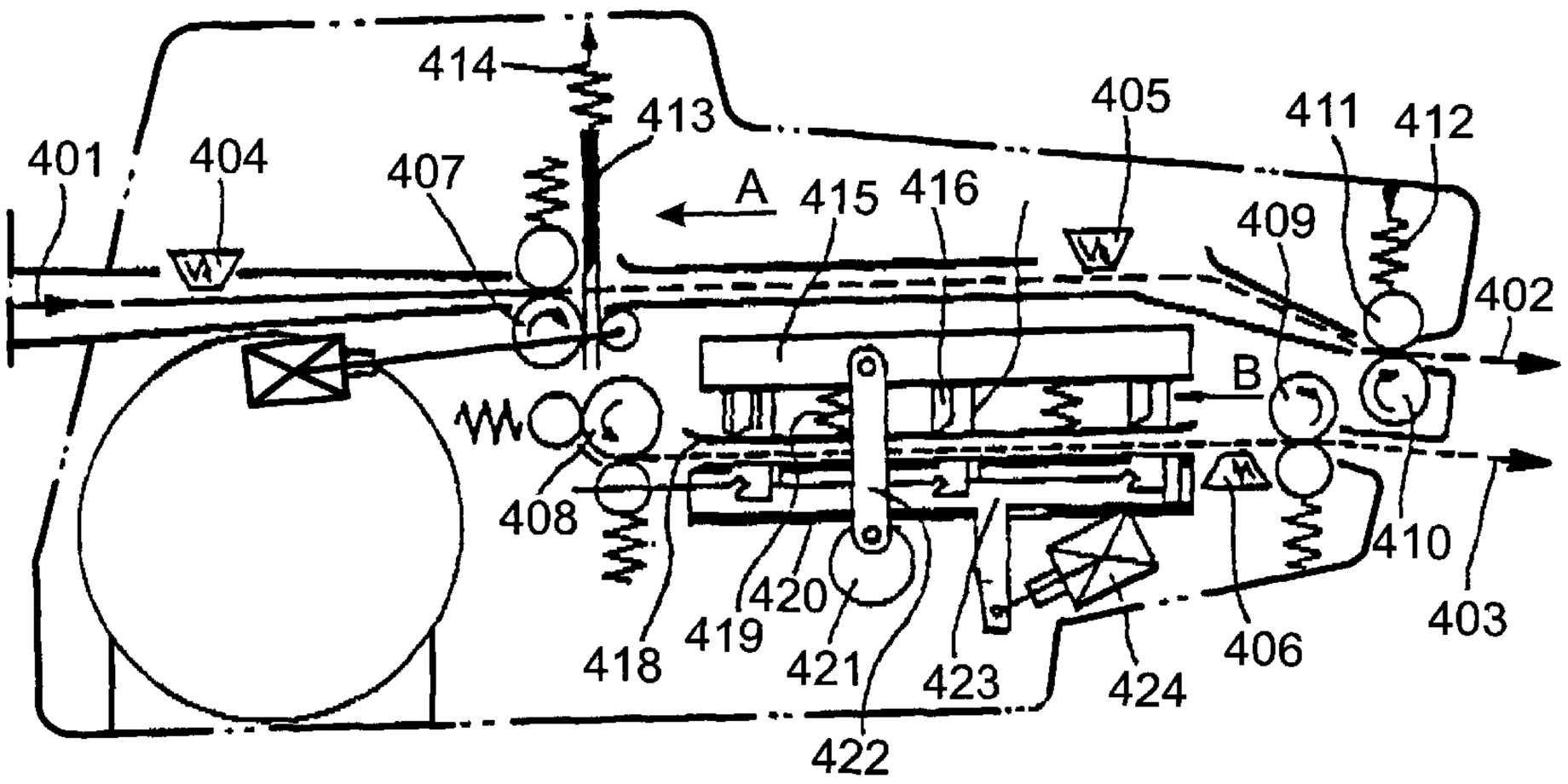
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Fig. 52

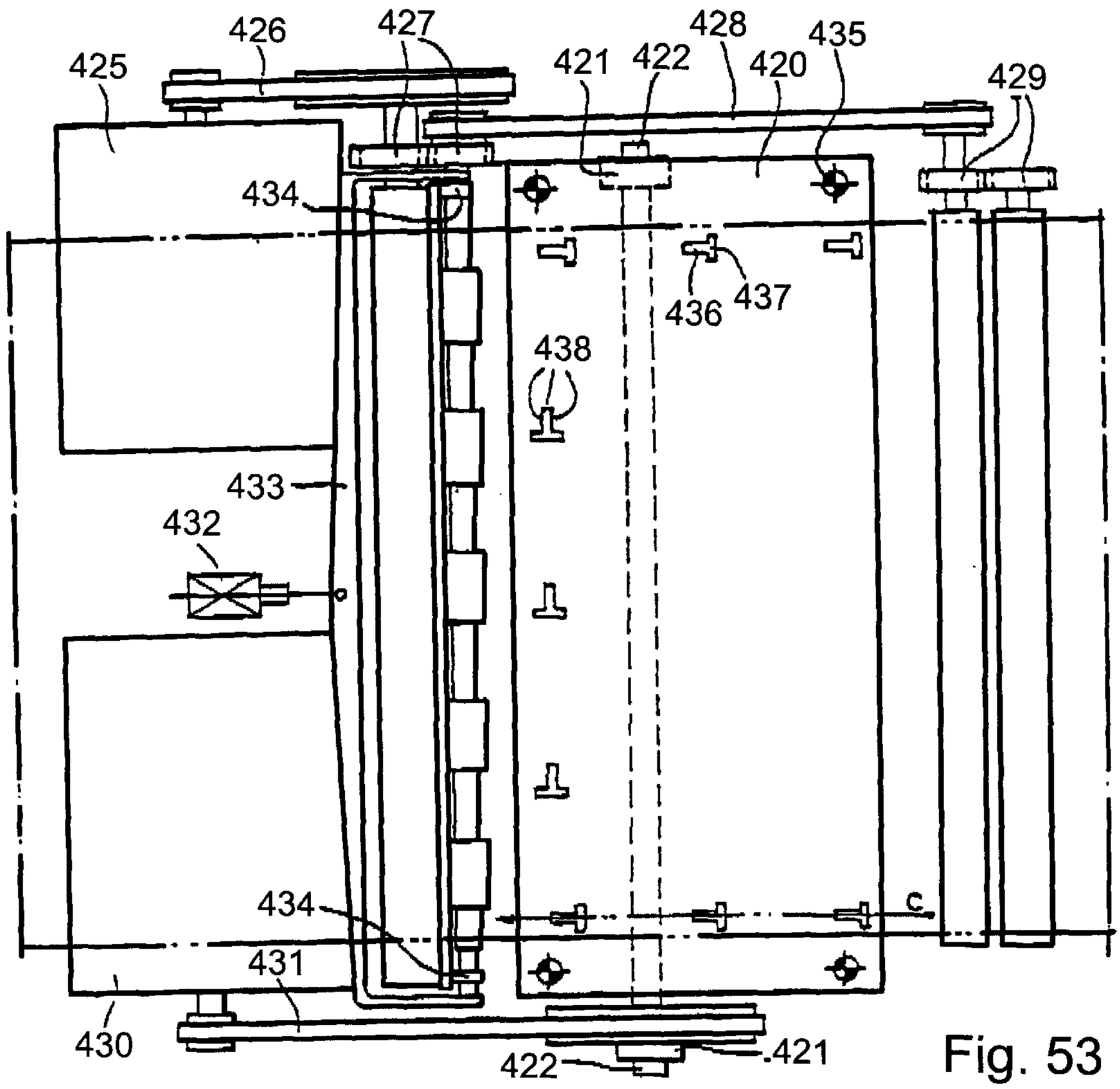
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Fig. 53

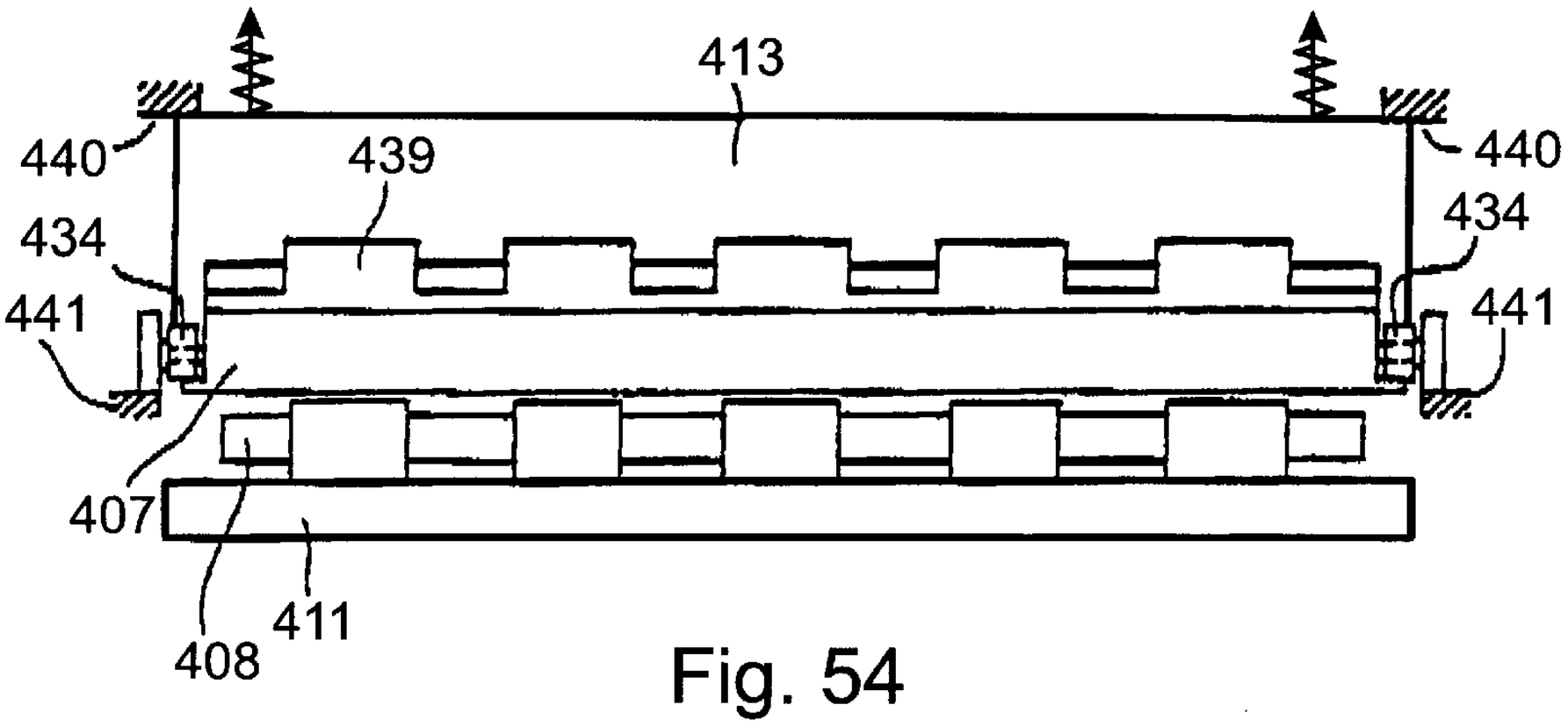

Fig. 54

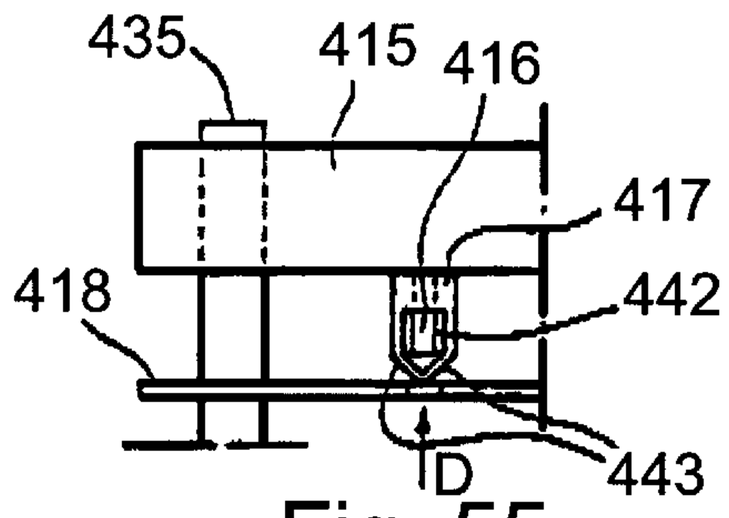

Fig. 55

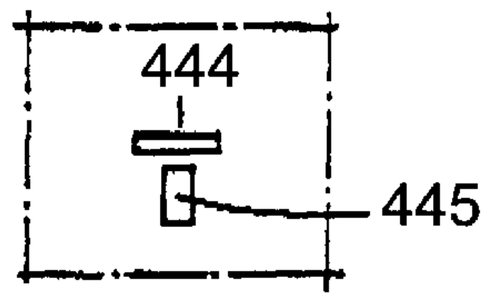

Fig. 56

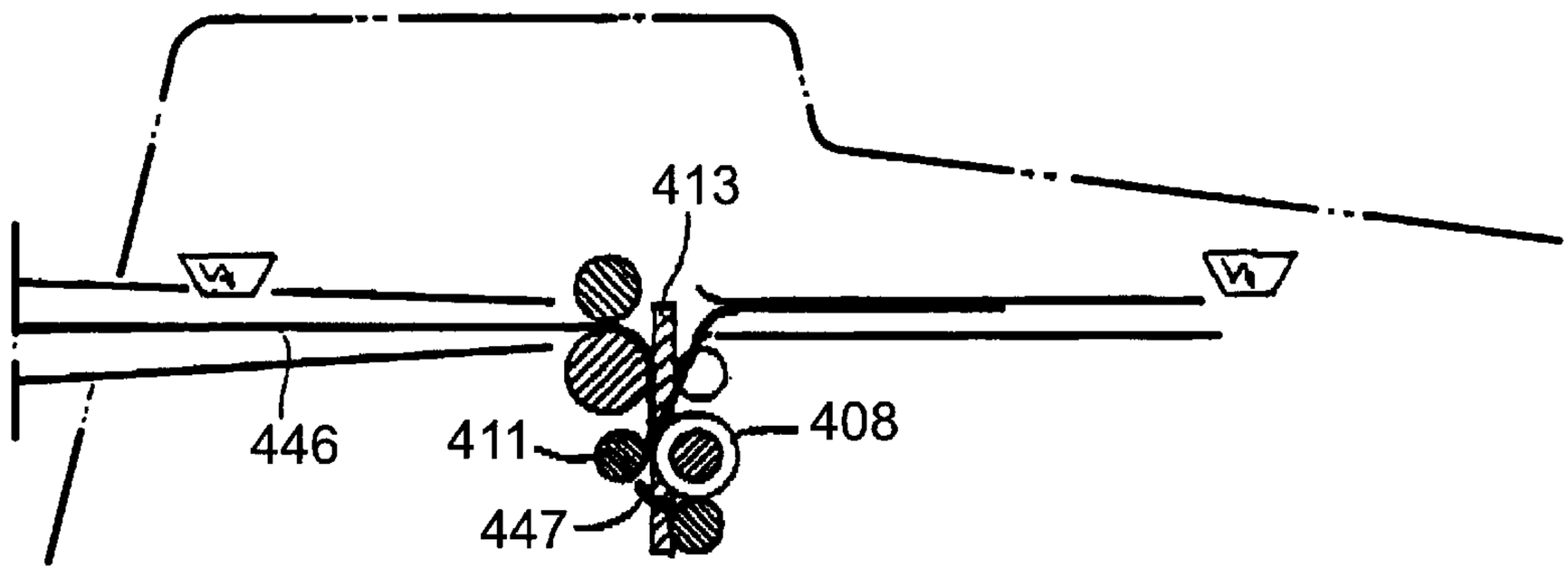

Fig. 57

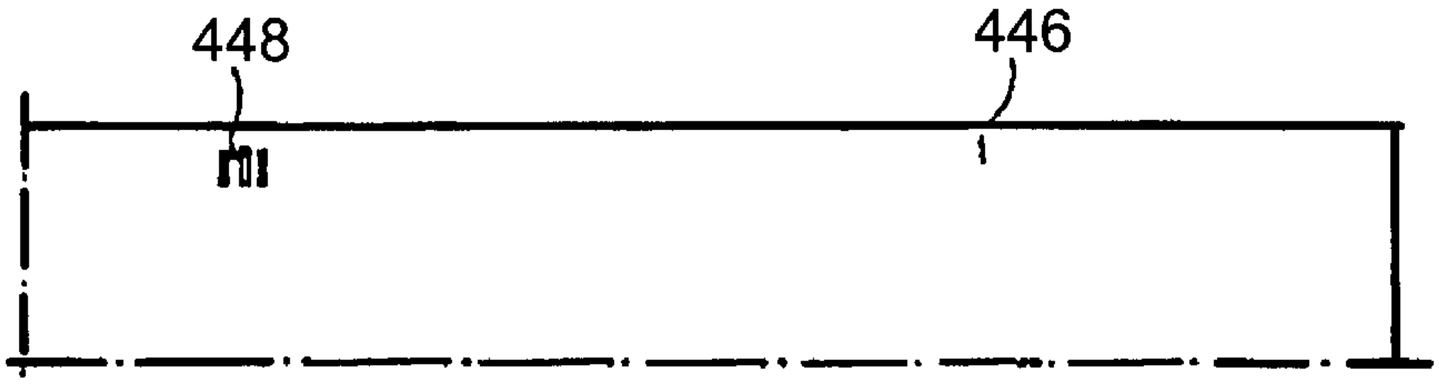

Fig. 58

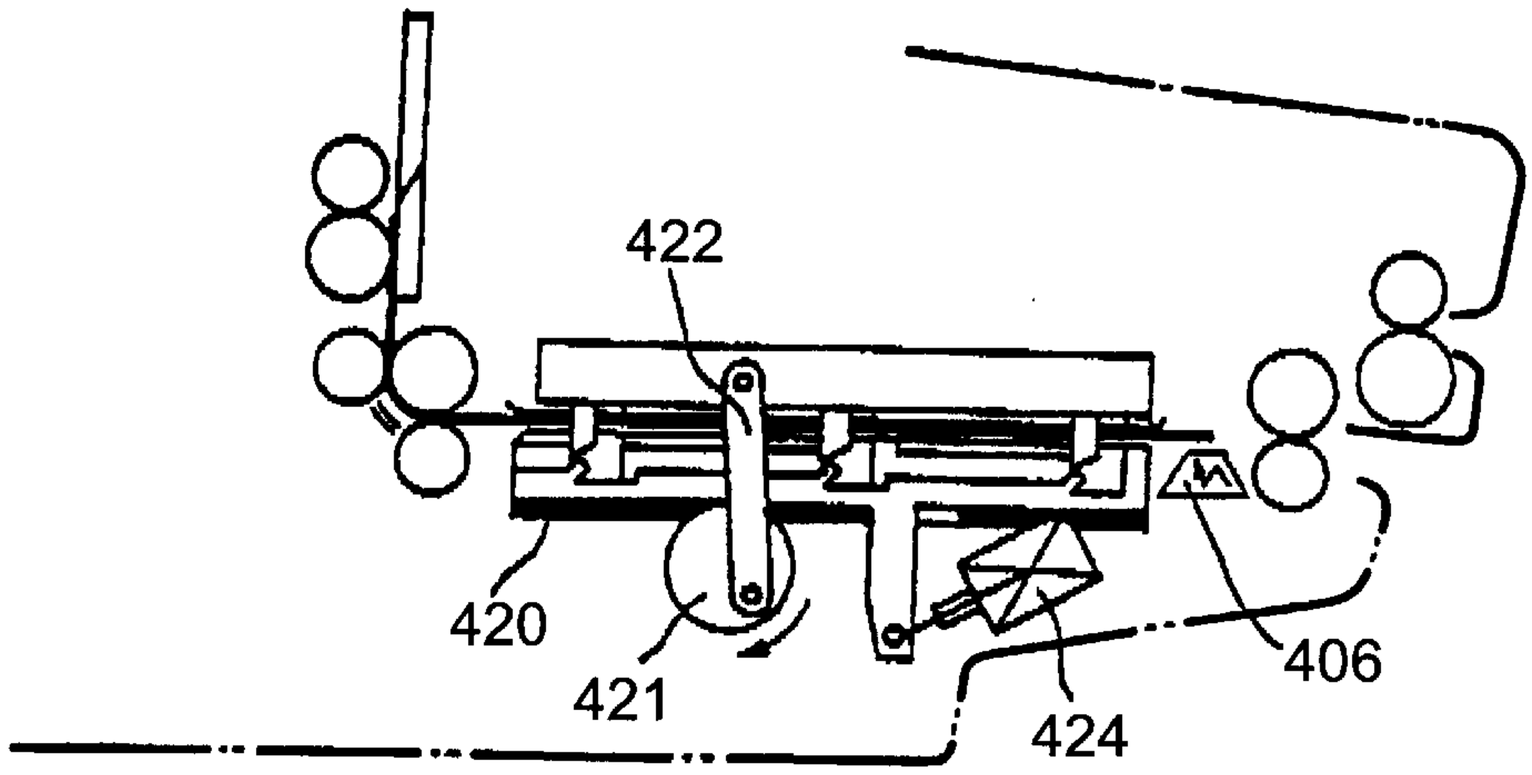

Fig. 59

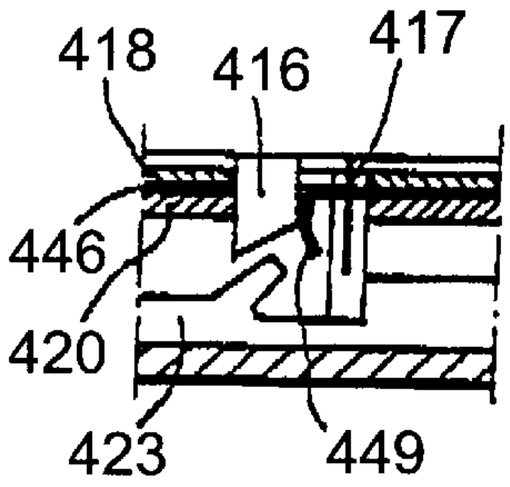

Fig. 60

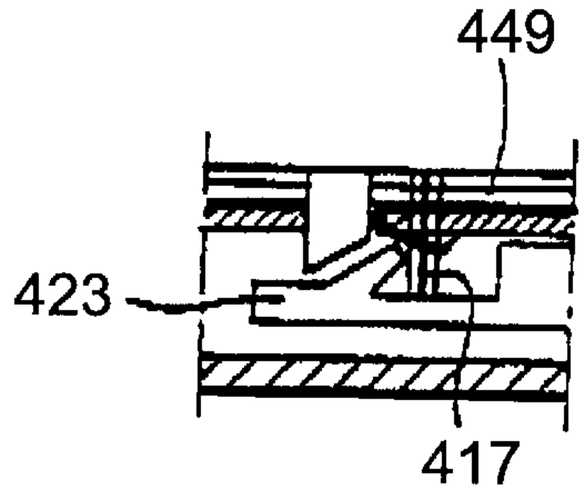

Fig. 61

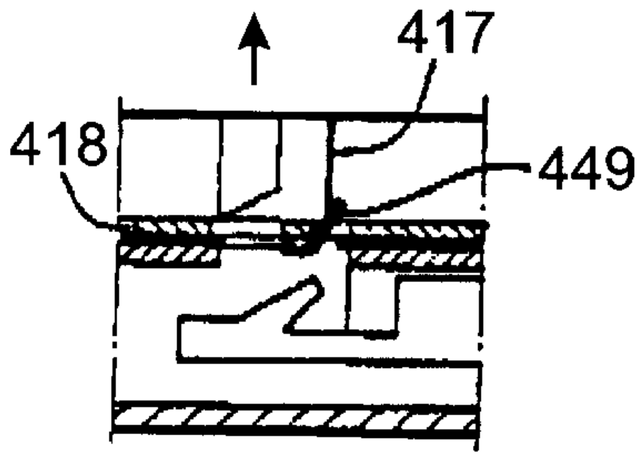

Fig. 62

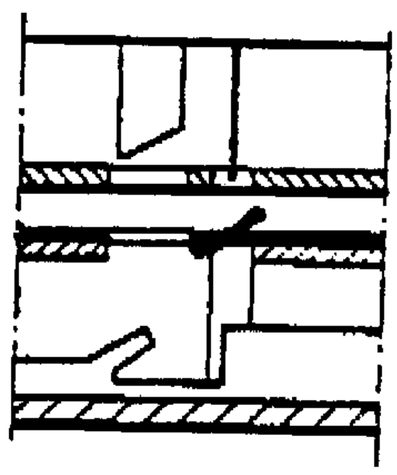

Fig. 63

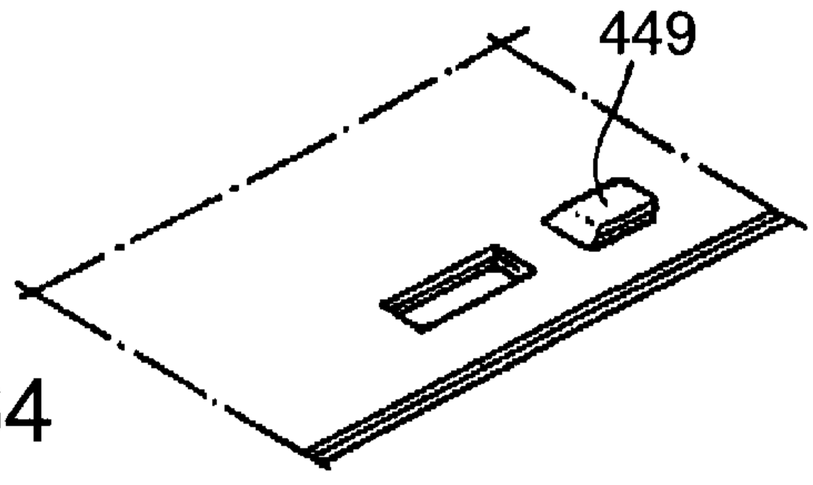

Fig. 64

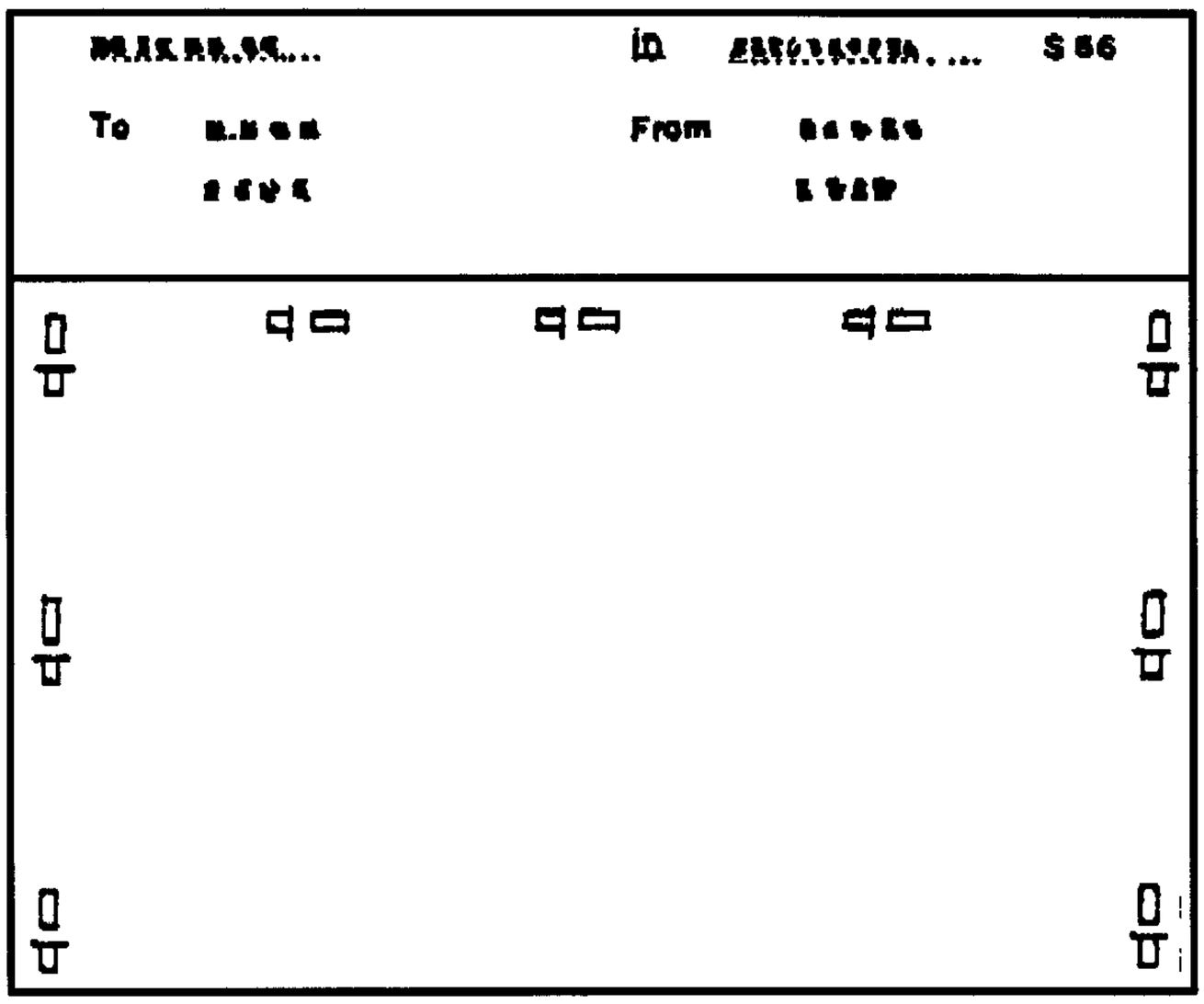

Fig. 65

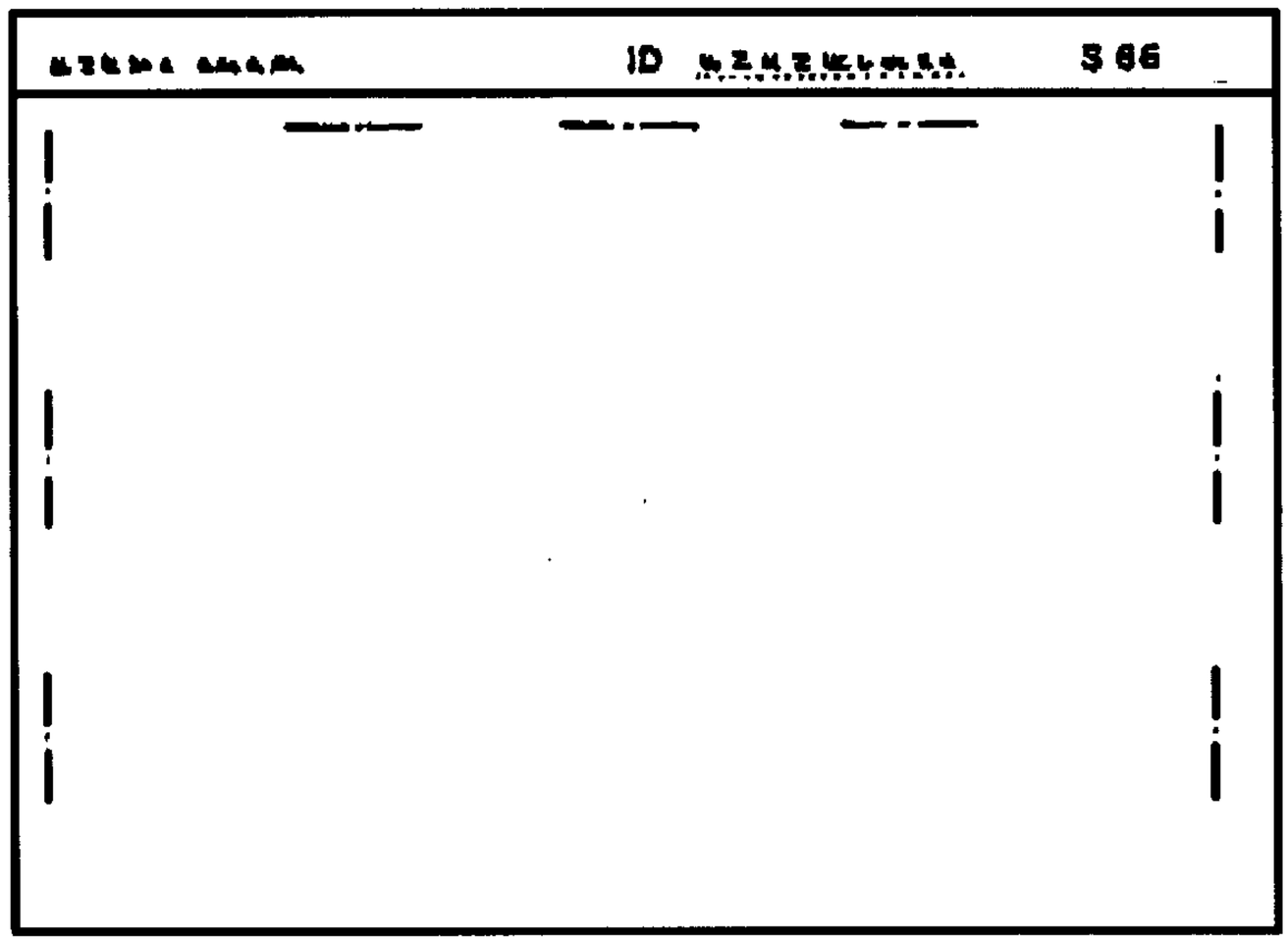

Fig. 66

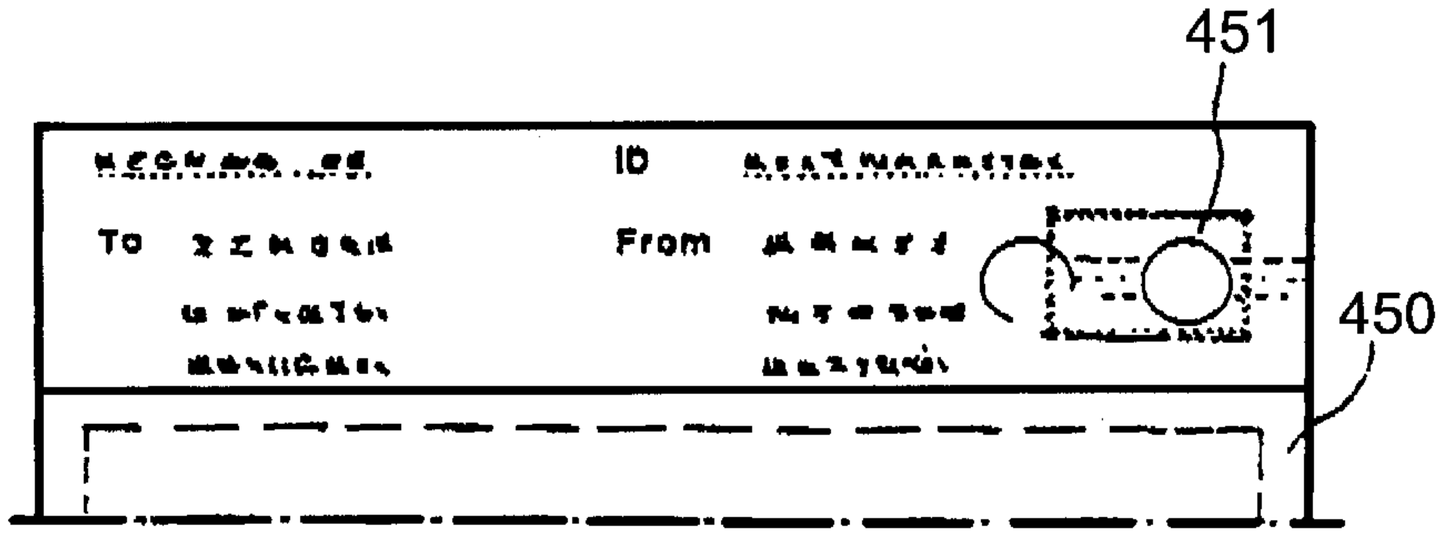

Fig. 67

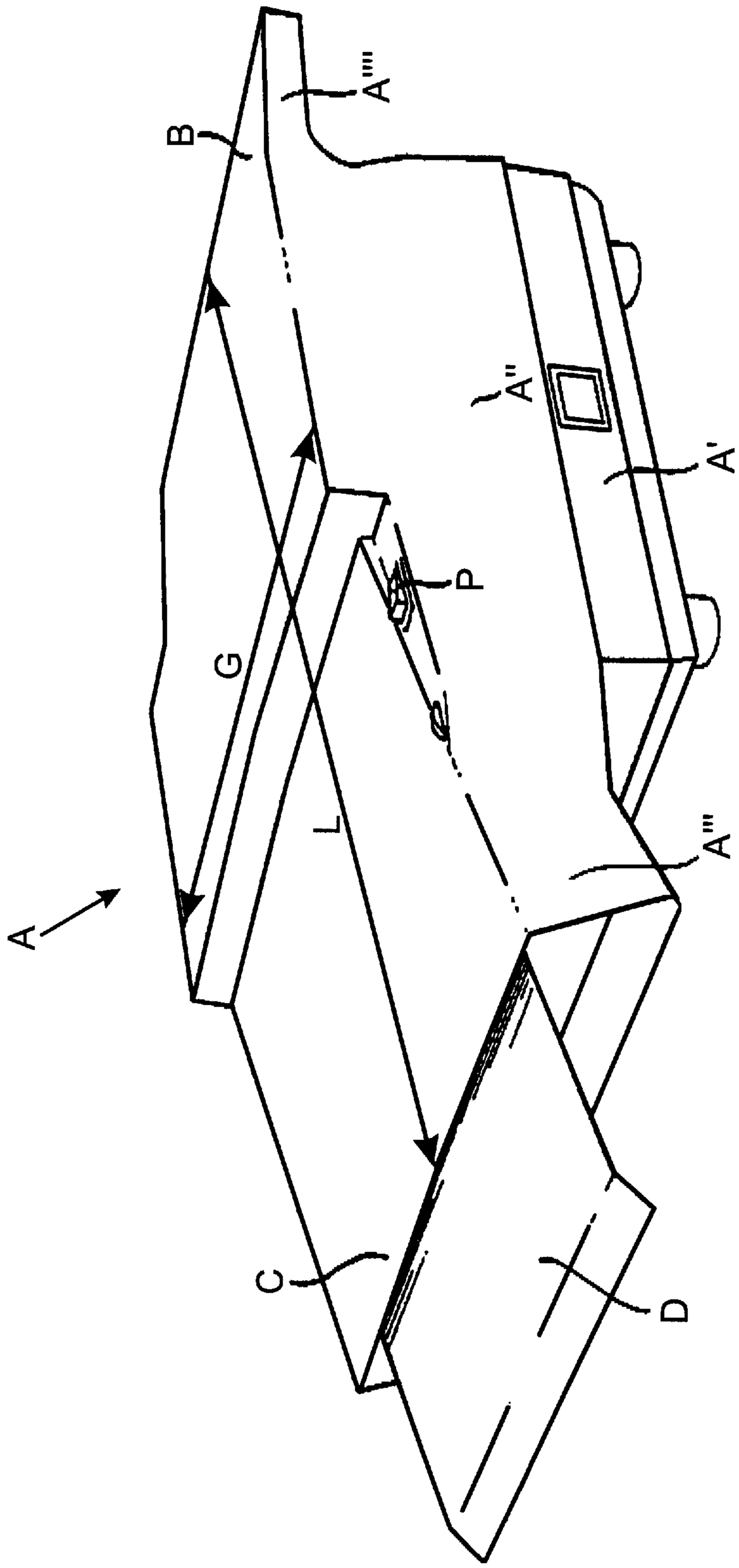

Fig.68

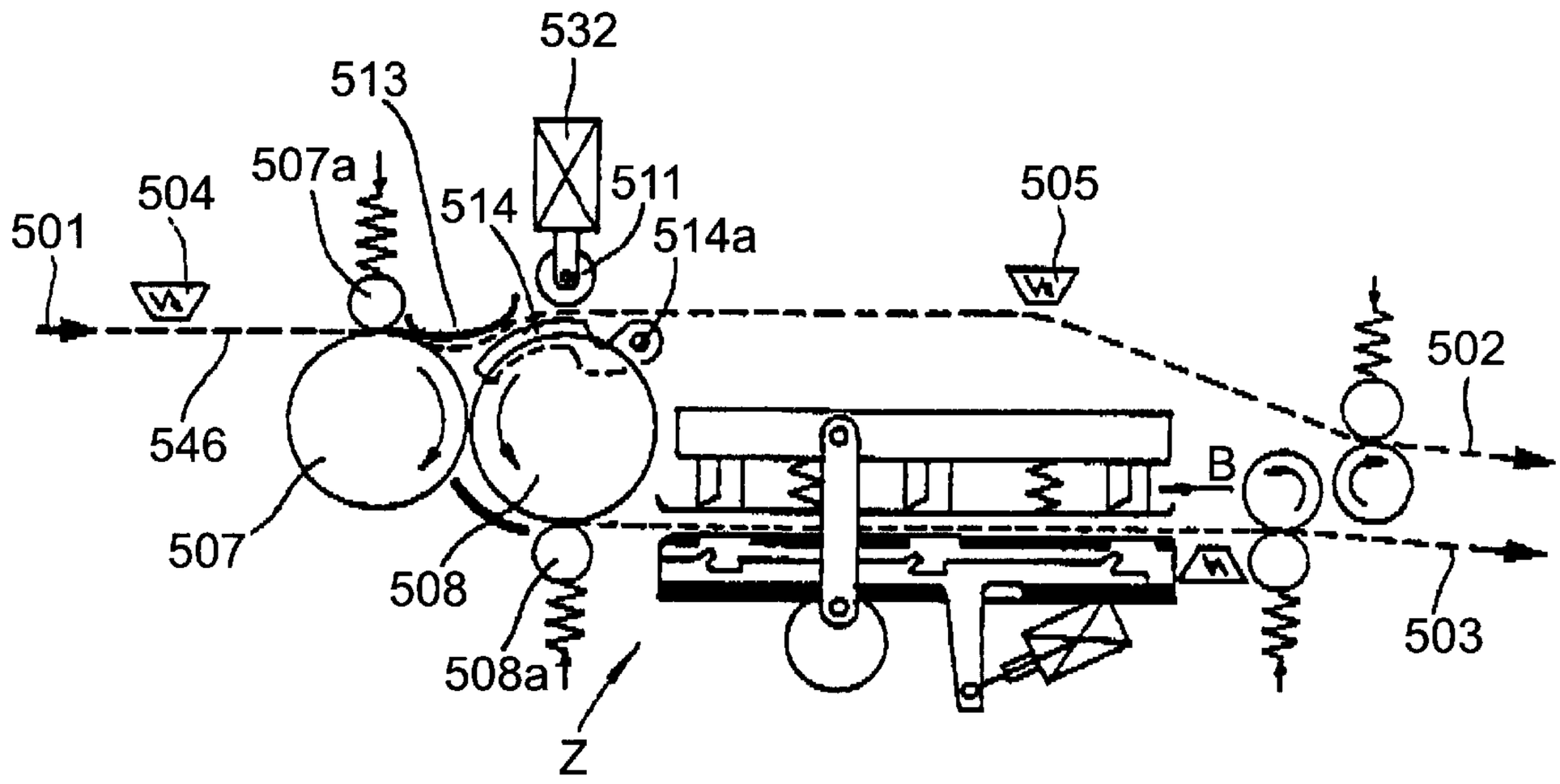
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Fig. 69

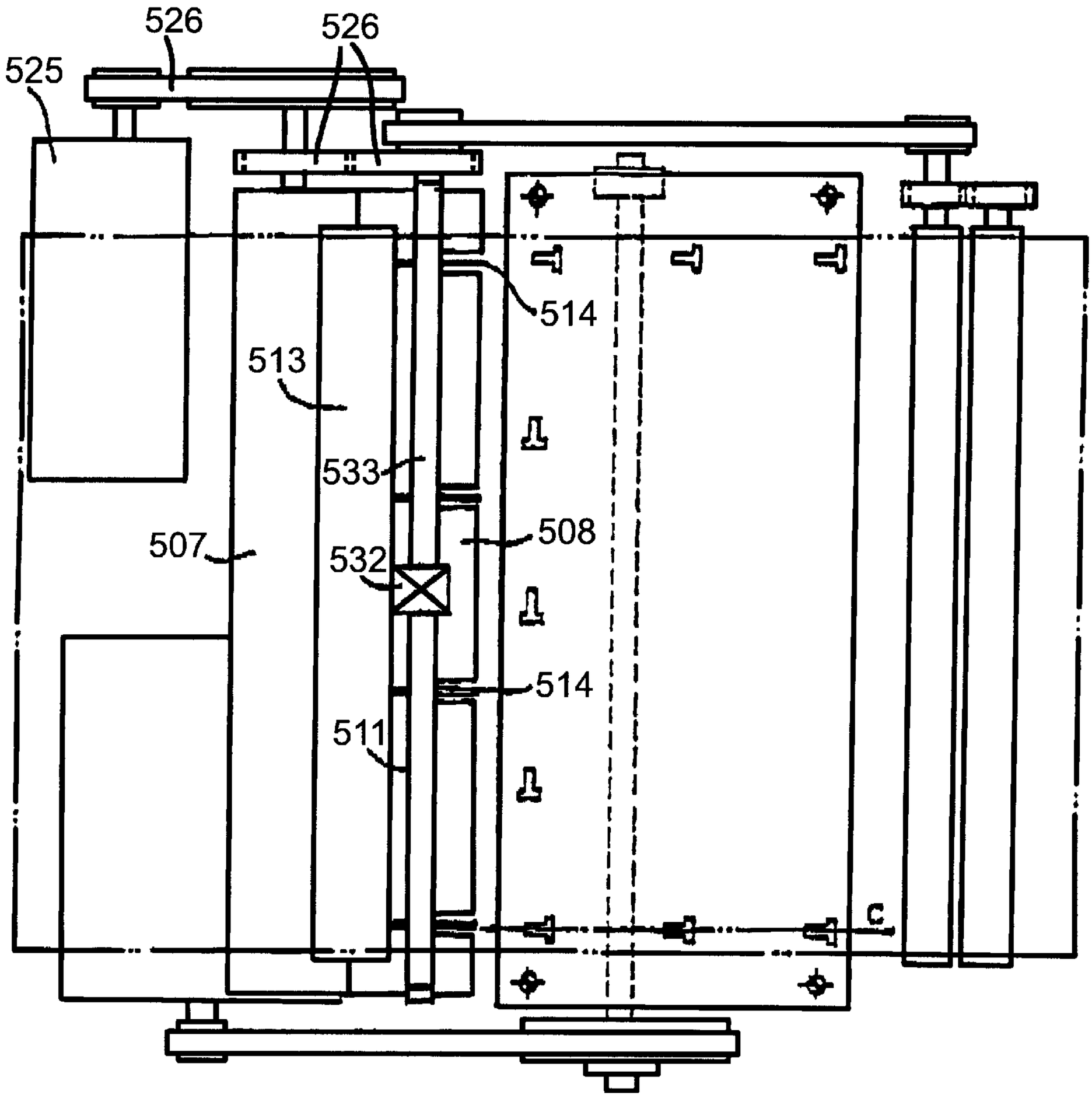
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Fig. 70

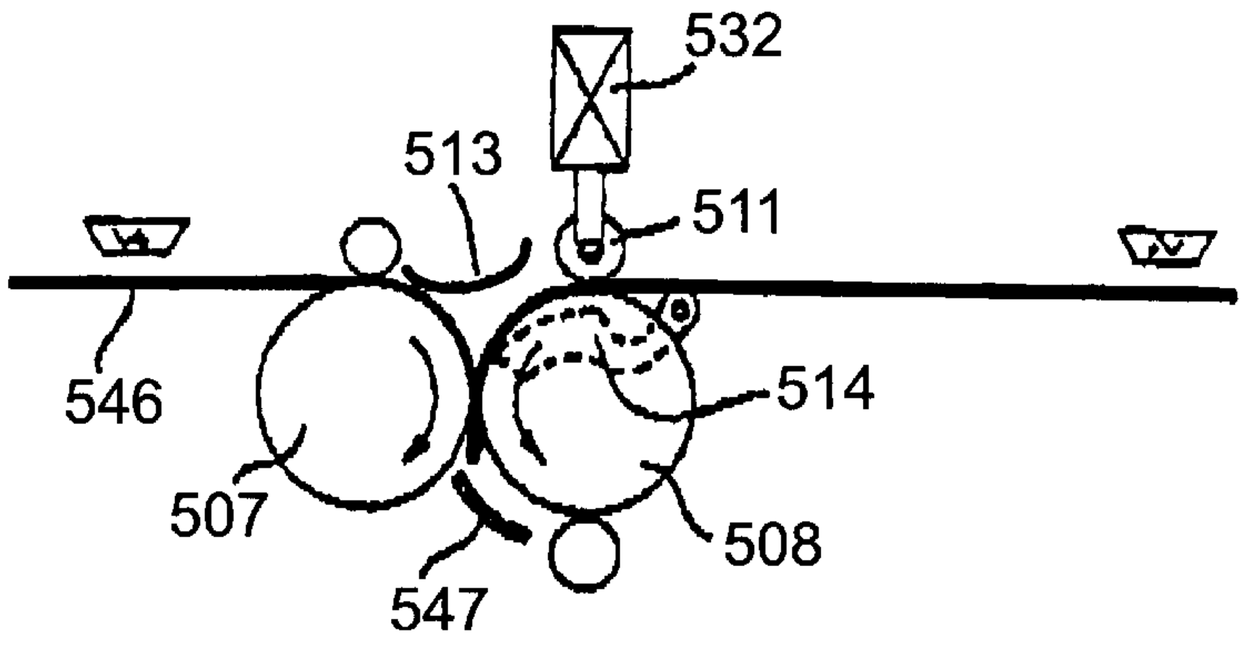
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Fig. 71

METHOD AND DEVICE AT AN EQUIPMENT FOR TELEMESSAGES

This application is a Continuation of U.S. patent application Ser. No. 08/500,892, filed Aug. 1, 1995 which is a U.S. national application of PCT/SE94/00077, filed Feb. 2, 1994.

FIELD OF THE ART

The present invention refers to a method at an equipment for sealing one or more telemessages in connection to the reception of each message respectively at a receiving apparatus. The invention also refers to a device for accomplishing the method.

The expression "telemessages" being used herein is to be considered in a broad sense. With the expression in question is here, amongst other things, included telefax messages and messages that are transferred by means of so called electronic mail etc. The receiving equipment is arranged to effectuate a printout on a printout medium that can be formed by paper or other material, at or after the reception of each message respectively. The printout can be carried out through automatical function that, for instance, takes place in connection to telefax apparatuses that can be set for automatic or manual function. Though, the printout might also take place at a wished, later time, at which the printout function can take place in accordance with manual activation through affections of keys, particularly occurring in connection to the handling of so called electronic mail. The receiving equipment comprises or is connected to a printout unit. In the case of electronic mail or the like the receiving equipment comprises, besides a printout unit, a computer, computer terminal or an equivalent apparatus.

When in the following specifically referring to the expression "telefax" it should be understood that, in the occurring cases, also such telemessages or tele equipment as have been discussed above are included.

PRIOR ART

It is known to envelop telefax messages and in the first place it has thereby been suggested to use a plastic enclosure that has been provided with an edge that can be torn off. The equipment for enveloping has been suggested to be mountable onto a certain type of telefax apparatus that has been provided in the open market to a relatively very high price (SEK 80-90 000).

DESCRIPTION OF THE INVENTION

Technical Problem

Plastic material is a polluting product that should be avoided to the largest possible extent. Enveloping in plastics in connection to telefax equipments and telefax messages, which in the future will increase substantially in extent, would bring along an unacceptable strain on the environment. Thus, in this context, there are demands for an ability to use more non-pollutant equipment and technique. The invention is concerned with solving this problem.

It is also desirable to be able to use a closing function for fax messages for a more common use, i.e. one wishes to be able to use the possibility of enveloping on a larger number of types of fax apparatuses and not only on specially adapted apparatuses. The invention also solves this problem.

It is important that the apparatus can be arranged with technically simple building components and reliable functions. Existing types of fax paper shall be employable also for the closing function. Thus, each fax paper respectively

shall be able to form the envelope itself (cf. so called post cards). The upper side as well as the lower side of the enclosure/envelope shall consist of the fax paper itself. The fax paper which is foldable in one embodiment shall furthermore be closable with simple, non-polluting means according to what has been said above. The invention also solves this problem.

Alternatively the fax paper should be able to be a part of the envelope together with a separate paper or sheet fed in over the fax message within the fax apparatus or the additional equipment thereof, after which the two sheets or the papers that are at least partly covering each other, are anchored to each other with said means. The invention can solve also this problem.

At the object of the invention a joining means shall also be employable in connection to the closing of "the envelope" and thereby it is important that the means is applicable to the sections in question in the right part in the total function course for the closing and fax paper production in the machine. A distinct application function of the means is thereby a great advantage and at the use of the folding function on the fax message the application and folding functions shall be possible to adapt in relation to each other. The invention also solves this problem.

At the object of the invention a punching or treatment function of the first and second paper materials shall be effectuatable if desired, so that the closure is possible to open and after opening not possible to close without it being possible to note that the enclosure has been broken. The invention is concerned with solving this problem.

At combinations of punching and joining means functions the means shall interfere with flaps and recesses in the paper material, so that an effective and secure closure arises. The invention solves also this problem.

Activation or heat functions shall be possible to supply in the closing procedure and serve as activating agent for the joining means if the latter is used. In one embodiment heat is supplied to the paper sections in question so that the paper material (amorphous+crystaline) is crystallized and forms a hard, brittle edge, where an adhering effect exists in the material and is possibly employed in combination with mechanical joining principles (flaps, holes, seem, weld, etc.) and joining means. The invention also solves this problem.

In connection with the closing function or after that a need of establishing a perforation which facilitates the offtearing or breaking function might exist. The invention solves the problem of establishing such a perforation in a technically simple way.

At a possible employment of frames in the equipment, that press the paper parts towards each other at the edges, the frames might be designed with upwards protruding parts, e.g. pin-shaped elements, that, during the clamping of the papers between the frames, protrudes through the paper material in a perforating purpose. The invention also deals with this problem by making possible a simple perforating principle in connection to the closing function.

In connection with telefax equipment messages are often sent on a plurality of sheets. Hereby the question arises whether all of the messages are to be enveloped. The present invention also bears in mind the problem of making possible an optional enveloping from the sending apparatus and/or from the receiving apparatus. Thus a user can choose if the whole message (several fax papers) or just parts thereof shall be enveloped. In this context it is also important that transmission of messages that the sender and/or the receiver want/s to be enveloped doesn't take place without the receiving apparatus having enveloping possibilities. The

lack of such an enveloping possibility might be due to the fact that the receiving apparatus lack any such equipment, that the equipment is incorrect, or that paper or enclosing means is missing in the receiving apparatus. Information referring to the aforesaid is transmitted to the sending apparatus or is indicated in the receiving apparatus. The invention also solves these problems.

The invention can also be referred to fax equipment including a first fax apparatus communicating with one or more second fax apparatuses in a telecommunication system. Thereby a first fax apparatus is equipped with an enveloping function for a fax message that thus can be received, enveloped and delivered in an enveloped state from the apparatus or an additional equipment connectable to the latter. The invention also comprises signal exchanging functions between the fax apparatuses involved. The signal exchange may consist of a protocol known per se, preferably standardised.

With this sort of fax apparatuses and fax equipment it is important that transmitting functions and enveloping functions can be co-ordinated so that, for instance, the fax message that is transmitted from a transmitting apparatus is not received and delivered in a fax apparatus that cannot provide the enveloping function on the occasion in question. It is also important to be able to indicate a signal system that makes trigging or a starting up of the enveloping function possible if the latter is desired. Likewise, it is important that the apparatus is equipped with possibilities for the choice of enveloping or not enveloping. The signal function shall be employable for different enveloping methods. Thus the signal function shall be employable for different types of enveloping functions that may comprise part courses such as punching, gluing, pressing, heating, etc.

In connection to enveloping of printout messages from apparatuses of said sort it is important to be able to obtain a unit which, from an outer point view, is flexible and light and which is easy to applicate to the printout apparatuses and fax apparatuses in question. The enveloping equipment shall be able to operate quietly so that it doesn't disturb its surroundings. A small outer volume is also important as this sort of equipment often is put onto tables and the like in homes and at offices. It is also important that the equipment that envelops the printout medium is able to operate reliably and with service intervals that don't fall short of the service intervals of the rest of the apparatuses with which it co-operates. In one embodiment it is of importance to be able to integrate fax transmission, enveloping and stamping and the present invention has as its aim to, amongst other things, solve this problem.

The Solution

The present invention refers to a system where a non-polluting enveloping of fax messages shall be able to take place. In a preferred embodiment the fax message itself is employed during the producing of the envelope or the enveloping. Hereby two main alternatives are present, one of which bears in mind that the telefax paper shall be folded and closed in or along its edges, also the upper edge. Preferably the folding is thereby accomplished so that the upper part of the lower paper part doesn't get covered by the overfolded part of the paper. On the part thus not being covered name information and other information, e.g. address information, can be arranged. This latter information is most often not of any damage as to the news but may simplify the very handling of the telefax distribution after the enveloping.

According to one aspect an embodiment according to the invention is characterised in that, during said closing, one or more first sections of a first paper material are brought into contact with one or more corresponding second sections on a second paper material, and in that members are activated for effectuating one or more breakable and after breaking not unnoticeable closures of the first and second sections between the first and second sections, said closures forming the seal.

According to another aspect a device according to the invention is characterised in that first and second paper materials are arranged with first and second sections respectively, which in connection to the receiving of the telefax message or the telefax messages are arranged to be able to bear on each other, and in that members are arranged to activate the first and second paper materials at said sections in a closing function forming the sealing and producing one or more breakable but after each breaking respectively not unnoticeable seals.

In further developments of the concept of the invention the first sections are located on one half of the fax message, preferably along the edges, and the second sections are located on the other half of the fax message, along the corresponding edges thereof. Further, second members are arranged to accomplish a folding of the fax message so that the sections or the edges become setable opposite to each other for bearing on or pressing against each other in said closing function. In a complementing or alternative embodiment the first sections are located on the telefax message and the second sections are located on a covering paper which is fully or partially projectable over the telemessage from a magazine of the apparatus in question.

In a further embodiment first means are arranged to form a folding part for the telemessage during a first function course, the telemessage being feedable or foldable around the folding part, with a first part that shall be foldable over the second part of the telemessage. Before a second function course which follows the first function course the first means is extractable, possible to fold out, etc. in a removing function before the clamping of the first and second sections on the first and second parts becomes effectuated.

The removing or extraction function may operate with telescopic function and/or a sidewards projecting function for the first means.

In one embodiment the closing function may operate with mechanical treatment functions of the first and second section, flaps and recesses being made parallel or one after the other in the first and second paper material in said mechanical treatment functions and where the flaps and the recesses become threaded into each other to form or become part of the breakable but unresetable closure. In a further embodiment, during a third function course, second means are arranged to supply the first and/or second sections with joining means which is/are activatable by means of activating means, for example heat effectuating members. The first and second paper materials are arranged to be able to crystallise at the first and second sections when exposed to activating means operating with heat (e.g. 185° C. or more) and form or participate in the closure and closures respectively at sections which are thus altered as to material properties. When employing two frames which between themselves press the first and second sections in question towards each other there can be arranged perforating members, affecting the paper material and simplifying the tearing off of the edge or the like. At said frames heat generating members can be arranged. Alternatively or as a supplement mechanical punching members can be arranged. Alternatively or as a supplement a joining means and members applying such a means can be employed. As a

supplement and/or alternatively seem effectuating members and/or paper welding members might be employed.

In a further embodiment the telefax equipment is provided with signal control functions, by means of which information can be introduced as to whether each telefax message respectively or parts thereof shall be sealed or not. The signal control functions can be activatable from the transmitting apparatus and/or the receiving apparatus. The closing function or the enveloping can be integrated in an apparatus in question or form an additional equipment thereof. In the additional equipment possible magazines for covering paper might be included. In this way the additional equipment and/or the fax apparatus might be provided with two different magazines, on one hand the permanent magazine for the fax paper and on the other hand a magazine for covering paper. Furthermore members providing the joining means might be included, e.g. members for glue and the like. Furthermore said punching members, seem members, etc. might be included.

Characterising for one further embodiment of the invention is, amongst other things, that the telefax message (i.e. the paper coming from the fax apparatus with the message in question) is folded in the transverse direction at one or more locations and that, preferably, on the edges between sections of the telemessage paper that are folded over each other a joining means is arranged, said joining means being activatable in connection with the enclosing. In the embodiment the joining means may consist of glue or paste activatable at a certain pre-determined temperature, e.g. a temperature of 135°–180° C.

In an alternative embodiment of the device for enveloping telefax messages in or at a telefax apparatus a paper partially covering the telefax message is employed and is applicated on the telefax information in question in connection to or after the folding/foldings of the telemessage. The folding or foldings causes parts of the telefax message to face each other with the information of the telefax message being enclosed. Said covering paper becomes located between said parts of the telefax message. The covering paper presents a joining means arranged on each side respectively thereof, said joining means being activatable at a pre-determined temperature or by another activation in question, so that at said temperature, sealing and enveloping occurs at different sections and/or one or more edges on said parts of the telefax messages.

In one embodiment the paper partially covering the telefax message corresponds to half the message or is slightly smaller than half the message. The partially covering paper is provided with joining means along at least three of its edges on both the sides thereof. Said joining means is activatable in accordance with the aforementioned. With glue, paste, or the like, the activating takes place at a temperature which is high above room temperature, e.g. between 130–°180° C. In one embodiment a paper magazine is arranged for paper with activatable joining means on both sides. Thereby strips or pieces of a different appearance are arranged to be possible to be cut off from each paper respectively and are applicable between parts of the telefax paper directed towards each other after folding.

In a further alternative embodiment for a device according to the invention, magazines are arranged for strips or differently shaped paper pieces with an activatable joining means on both sides. The strips or pieces are applied between parts of the telefax message directed towards each other after the folding.

In a further alternative embodiment for enveloping or enclosing a telefax message in or at a telefax apparatus and where joining means is employed in the form of strips or differently shaped pieces having joining means on one side only, the strip or the piece is arranged with a through recess, so that, during activation at a certain temperature, means, glue, etc. passes through each recess respectively to the side not being provided with the means, glue, etc. and effectuates adhesive (gluing, pasting) effect between the latter side and the folded part in question of the telefax message.

In a further alternative embodiment the message is folded into three parts, the two parts comprising the information on the telefax message being directed towards each other and the third part having common, not secret information or information classified as secret, such as name of the receiver of the message and the address of the same.

The invention shall also lead to a new way of thinking within the handling of post. In e.g. express parcels by postage, the letters in question are sent physically long distances (car, train, aeroplane, etc.) to collecting places, from where the distribution takes place by means of conventional mail delivery service. According to the present invention the message transmission shall be possible to take place via the telecommunication network, at least over longer geographical distances, (compare for example with parcels from Sweden to Australia, USA, etc.). The parcel in question will thereby be sent through the telecommunication network from Sweden to a collecting place in the other country, where the mail delivery service can take place in a conventional way. In this way one would be able to hand in an original, e.g. through normal letter deposition via letter box or directly, which original is employed for fax transmission or the like from the post office of the own country. The fax or the like may thereby reach another country without any loss of time and in a sealed state and be distributed in a conventional way in the other country, the time for a long physical distribution having been eliminated.

In one embodiment a mechanical sealing is to take place, while in other cases the seal may be supplemented or replaced by pasting/glue etc.

In accordance with the present invention the printout unit will comprise or be connected to the unit enveloping the printout medium and being arranged to employ a part of or the complete printout medium in the enveloping enclosure. The enveloping unit is arranged to seal the printout medium on one or more edges thereof. The printout medium is feedable to and/or in affecting members effectuating the sealing of the printout medium via the edges thereof.

In one embodiment of the invention the enveloping device comprises first feeding members driven by a first feeding arrangement, for feeding of first parts of the printout medium. The enveloping unit further comprises members affecting the printout medium for folding, which members get into function when said first parts of the printout medium have been fed forward to the members. Said affecting members may present an edge or a lip, extending over the most substantial parts of the width of the printout medium. The edge or lip gets into co-operation with the printout medium in an affecting direction that is preferably angled, preferably approximately 90° in relation to the feeding direction of the printout medium. The movement of the affecting member can be made short (15–25 millimetres), which is of importance as to space. During the co-operation with the printout medium the affecting member presses said printout medium, with the section thereof co-operating with the member, between a pair of rolls, pulleys, wheels, etc. The feeding of the printout medium by means of the first feeding arrangement causes further feeding of the initiated folding, which, by way of example, can be accomplished on

the generally intermediate parts of the printout medium. The equipment may be arranged to accomplish folding at different parts of the medium. The further feeding takes place towards a second feeding arrangement. The member and the feeding arrangements co-operate with the printout medium along the most substantial parts of the width thereof. In one embodiment the second feeding arrangement can direct the initiated folding of the printout medium towards the members affecting the edges of the printout medium. The latter members may comprise punching members and flap affecting members arranged along preferably three of the edges of the folded printout medium, said edges thereby possibly being formed by a front edge and the side edges. Alternatively or as a supplement the affecting members may comprise equipment for clamping, gluing, etc. the edges of the folded parts against each other.

In one embodiment the punching and the flap affecting members are chosen in a number assuring an appropriate closing of the folded printout medium, in accordance with its application area of use. Said punching and flap affecting members may be 5–25, preferably 10–15, as to their number, with printout medium in A4-size.

In one further embodiment each punching member respectively is provided with a first punching member or punching function arranged to accomplish a medium flap or medium flaps during its function and a second punching function arranged to accomplish a recess arranged by the side of the recess for the flap or with the flap, at the activation thereof. The flap/s may thereby be retained via an edge or end thereof. During their function, the flap affecting members are arranged to accomplish insertion of each outpunched flap or pair of flaps respectively in the adjacent recess, so that the flap or pair of flaps are taken up into the adjacent recess via the bottom side of the printout medium, preferably via its or their ends. In one embodiment a knife or punch make part of the flap affecting member and punches the adjacent recess and is provided with a recess into which the flaps are pressed by means of inserting members. The flaps are pulled through the adjacent recess during the upward movement of the knife of punch. Also stripping members are included. Each flap respectively will thereby extend from the bottom side of the printout medium via its belonging recess and to the upper side of the printout medium at the adjacent recess. Further the punching members might be arranged in holders, e.g. comprising two parts that are generally parallel arranged and that support the punching and flap affecting members. Thereby the function of the latters can be coordinated through movements of the holders, so that the punching and the flap affection is effectuated when the holders are moving towards each other. Preferably or by way of example the holders are operated with an eccentric function which accomplishes the movements of the holders.

Sensors are being employed for controlling said functions. Thus, a first sensor is employed, which detects where pre-determined parts of the printout medium have been infed to or with a pre-determined length. When the sensor detects the edge of the printout medium it causes initiating of the affecting member, which thereby gets into co-operation for said folding function. Furthermore, a second sensor can be employed, which detect when the folded sections have reached a certain location or position in the affecting member, or between said holders. As the second sensor is activated said function and flap affecting movements are initiated. Sensors for controlling position for folding are also included. One or more of the sensor functions can be integrated. In a possible embodiment the printout medium is provided with a marking that might be formed by a bar code, or another sort of marking, which is detectable by means of equipment which may comprise or be formed by a third sensor. In accordance with the detection, the latter member controls the enveloping equipment so that it envelops the printout message. Also the position of the folding on the medium might be determined. Printout media (paper) with such a marking are thus in advance put into the printout apparatus in question (fax apparatus, printing equipment, etc.). The folding may be effectuated in such a way that a remaining part is left open for the reading from outside. The remaining part or space can be provided with a stamp, address, remitter, receiver, identification, code for enveloping, etc.

The invention also comprises a system with devices of the described sort. One or more such devices with enveloping function may be set up or arranged in a post office or a post supplying office, e.g. within larger companies, units, etc. Thereby a customer can address himself to an office in question to have an enveloped message transmitted. Thereby the message can be transferred from the first office to another post office or post supplying office, which, by way of example, might be located in another country, be constituted by a larger company, etc. The device at the first office may be operatable by personnel at the office or by the customer himself. In the latter case, the device may for instance be arranged for common use. The personnel may receive the original that is to be faxed through ordinary postal service or personally. In this way, the message in question can be transferred in great secrecy through the telecommunication network a first geographical distance and then be distributed from the second office in a conventional way, known per se, a second geographical distance. The offices may provide pre-printed or pre-preparated printout media, preferably printout media provided with stamps, spaces for addresses, code or marking for enveloping, etc.

Through the invention a new product can also be presented, namely a product being effectuated by means of printout equipment for fax messages and/or messages through electronic mail, etc. The product is characterised in that the printout message has the form of an enveloped message. The enveloping takes place in accordance with a control which tells if enveloping shall be present or not.

Advantages

By means of the equipment suggested in the aforementioned and the method accordingly associated thereto an attractive closing function which is non-polluting is now obtained. The principles for the execution of the invention can be carried out with known standard elements and known standard functions. The folding function in the apparatus, if employed, can be made relatively simply as well as the arranging of the additional magazine, which is needed for the employment of covering papers. The fax paper and possible covering paper are thereby being arranged so that the information on the fax paper doesn't become readable from the outside. In this way the fax message or the fax messages doesn't/don't become accessible (readable) for anybody in the presence the apparatuses in question. This can be a great advantage at different companies, post offices etc. employing apparatuses for several users.

DESCRIPTION OF THE DRAWINGS

The presently suggested embodiments for a method and a device according to the invention will be described in the following, with simultaneous reference to the enclosed drawings, in which:

FIG. **1** shows a conventional fax apparatus in a horizontal view, provided with an additional equipment for enveloping in accordance with the invention;

FIG. **2** shows an embodiment of a folding part in a lengthwise section, included in the equipment of FIG. **1**,

FIG. **3** is showing a conventional fax apparatus in a horizontal view, with an additional equipment according to a second embodiment in relation to the embodiment according to FIG. **1**,

FIG. **4** is showing a second magazine for covering paper, in a side view, employed in connection to the embodiment according to FIG. **3**,

FIG. **5** is showing the design of a covering paper in a horizontal view,

FIG. **6** is showing means for compressing of first and second sections on first and second paper materials and belonging activating material,

FIG. **7** is showing an electric heat coil for heating a pressing part, for instance the one shown in FIG. **6**,

FIG. **8** is showing, in a horizontal view, parts of members that are applying joining means, in connection to first sections on a first paper material,

FIG. **9** is showing, in a side view, an applying principle for joining means on first sections on a paper material,

FIG. **10** is a side view showing a fax apparatus with a closing part operating with the folding principle for the paper,

FIG. **11** is a side view showing an enveloped message consisting of a folded telefax paper,

FIG. **12** is a cross-section showing punching members in additional equipment,

FIG. **13** is showing an alternative embodiment of the equipment according to FIG. **4** where the covering paper is fed from a roll and cut in a known way by means of cutters,

FIG. **14** is a horizontal view from above, showing the design of an enveloped message according to FIG. **11**, where an upper space isn't covered and may be filled with name, address, etc. for the receiver of the message,

FIG. **15** is showing a combined joining principle with punched flaps and recesses in the first and second sections of the paper materials and where also the joint has been supplied with joining means,

FIG. **16** is a side view showing a seem function at the first and second sections,

FIG. **17** is showing a joining method with property changing functions in the first and second paper materials.

FIG. **18** is showing an alternative design of flaps between first and second paper materials,

FIG. **19** is showing an alternative embodiment of out-punched flaps,

FIG. **20** shows, in a schematic form, signal transfers between the different fax apparatuses in a fax equipment,

FIG. **21** is showing an equipment for control signal information within the fax apparatus equipment,

FIG. **22** shows, in a side view, joining by means of a joining means (glue),

FIGS. **23–24** are showing different function courses of message enclosing by means of tape which only has glue or the like on one side,

FIGS. **25–25***a* are showing examples of the design of a frame,

FIGS. **26–26***a* show, in a horizontal view, the fax message and a paper partially covering the fax message, and the vertical section of the covering paper,

FIGS. **27–27***a* are showing two different function courses of an enveloping method,

FIG. **28** shows, in a vertical view, a further embodiment of an enveloping course,

FIG. **29** shows, in a horizontal view, lengthwise displaceable feeding parts of a telefax message in question,

FIG. **30** shows, in a vertical view, another function stage of the function stage according to FIG. **6**, where one folding part (upper folding part) of the message has been made relatively smaller,

FIG. **31** shows, in a horizontal view, paper with glue or the like on both sides, said paper being only partially overlappable in relation to the telefax message and being cutably arranged at that partial overlapping to accomplish a thin strip along one edge of the telefax message, said thin strip having glue or the like on both sides thereof,

FIG. **32** shows, in a vertical view, a magazine for strips meant to be applied on the edges of the telefax message and presenting glue or the like on both sides,

FIG. **33** is showing a horizontal view of a strip according to FIG. **32**,

FIG. **34** is showing, in a horizontal view, the enveloped message according to FIG. **30**,

FIG. **35** is a side view showing a magazine for joining members and a folding device for fax messages,

FIG. **36** is showing the folding device in a closed state,

FIG. **37** is showing the folding device in an open state,

FIG. **38** illustrates a yoke-shaped folding part with heat generating members,

FIG. **39** is showing punching members for the fax message,

FIG. **40** is illustrating one of the punching members in FIG. **39** in an elevational view,

FIG. **41** is a principal view of an equipment according to the invention with communicating fax apparatuses,

FIG. **42** is showing, in a schematic form, a control unit for the equipment according to FIG. **41**,

FIG. **43** is illustrating a folding device for a fax message in the form of a continues paper web,

FIG. **44** is showing a fax message in an elevational view after folding,

FIG. **45** is showing pressing and/or punching members for a web of fax messages,

FIG. **46** is illustrating how the folding and joining function can be supplemented by joining members,

FIG. **47** shows how the web has been cut into parts or fax messages with joining members between themselves,

FIG. **48** schematically shows an alternative methodology for the folding of fax messages,

FIG. **49** schematically shows an equipment with communicating fax apparatuses with enveloping-determining affecting members,

FIG. **50** is illustrating a further web folding method,

FIG. **51** is showing another folding methodology,

FIG. **52** is a schematical side view illustrating an enveloping device according to the invention,

FIG. **53** is a view of the device according to FIG. **52**, seen from above,

FIG. **54** is a detailed view, seen in the direction of the arrow A of FIG. **52**,

FIG. **55** is a detailed view, seen in the direction of the arrow B of FIG. **52**,

FIG. **56** is a detailed view seen in the direction of the arrow B and showing a stripper,

FIG. **57** is a detailed view illustrating a stage of the folding procedure,

FIG. **58** is an elevational view of an unsealed document with a barcode,

FIG. **59** is a detailed view illustrating a stage of the punching of a folded document,

FIG. **60** is an enlarged view of a punch and knife unit according to FIG. **59**,

FIGS. **61–63** are different views illustrating the forming of flaps and insertion of those same into a locking engagement,

FIG. **64** is an enlarged view of a threaded pair of flaps,

FIG. **65** is an elevational view of a first page of a transmission,

FIG. **66** is an elevational view of the following pages,

FIG. **67** is an elevational view of a "fax letter",

FIG. **68** is a perspective view of an enveloping apparatus according to the invention,

FIG. **69** is a view similar to FIG. **52** but illustrating a somewhat modified embodiment,

FIG. **70** is a view of the apparatus according to FIG. **69**, seen from above, and

FIG. **71** is a detailed view illustrating a phase of the folding of a fax message.

EMBODIMENTS ACCORDING TO THE FIGS. **1–22**

A known fax apparatus of the sort that might be present on the market is shown with **1**. It is built with or provided with an additional equipment **2** for the enclosing of faxmessages **3**. With enclosing is hereby meant that the whole or parts of the text, figure or other information on the fax message shall be possible to cover before it leaves the apparatus **1**, **2**. The message or the messages shall thus not be possible to be read by any unauthorized but shall leave the apparatus in an "enveloped" stage. In one embodiment the fax itself shall form the envelope by being folded and closed along its complete or parts of its edges. Thereby the folding apparatus **4** is arranged in the casing **5** of the additional equipment. An enveloped message is shown with **6** and is on its way out from the apparatus in the direction of the arrow **7**. The holding takes place around a part **8** that can take two positions, the second position, forming a side displacement position, being shown with **8'**. A member (e.g. a motor with our without linking, gear wheels etc.) operating the movements of the folding member is shown with **9**. According to FIG. **2** the folding part may alternatively or as a supplement be telescopic and operate with retracting and projecting movements for a part **10** in relation to a part **11** which in its turn can be telescopically arranged in relation to another part (not shown), etc. The manoeuvring of the folding part is necessary as the paper **3** being folded around the part **8** is to be closed along its edges in accordance with the following.

In FIG. **3** a conventional telefax apparatus is shown with **1** and is connected or connectable to an enveloping part **13** comprising a magazine **15** which is arranged at the side, over or under the outlet path **14** for a fax being fed out from the apparatus **12**, the magazine **15** being meant for covering papers **17**, **18** which are feedable in a transverse direction **19** over the fax **20** fed from the fax apparatus **12**. The paper in question may be included in magazines above the feeding path **18** for the fax and is thereby able to fall down due to its own weight. The covering paper covers the telefax paper **20** completely or partially and the two papers **18**, **20** form an envelope together when they have been joined in accordance with the following.

Thereby the information on the paper **20** is turned towards the bottom side of the covering paper so that the information can't be read by any unauthorized person from outside the envelope.

FIG. **4** shows the paper magazine **15** from the side and in the present case the covering papers are pre-sheared or pre-cut and laid upon each other. The outfeeding members **21**, **22** are arranged to outfeed the covering papers one at a time in the direction of the arrow **23**, over the fax paper in question. Outfeeding and control may occur in an known way. A control signal for activating and stopping the outfeeding members **21**, **22** is symbolised with i**1**. According to FIG. **5** each covering paper respectively can be arranged with sections **18***a*, **18***b*, **18***c*, **18***d* that are pre-preparated with joining means (e.g. glue) or pre-treated in a mechanical or chemical way.

In FIG. **6** two paper materials are represented with **24** and **25** respectively. The first material has first sections **24***a* and the second material second sections **25***a*. In the present case two frames **26** and **27** are employed, said frames extending around the peripheral edges of the papers and covering said sections **24***a* and **25***a* respectively. Said frames are arranged to take two different positions, of which the first position is shown in FIG. **6**. In a second position the frames are affected in a direction towards each other and are bearing on each other with said section **24***a* and **25***a* inbetween. Depending on if a joining means has been arranged between the section **24***a* and **25***a* activating members **29**, **30**, **31** are employed. These activating members may consist of members generating infrared radiation, heat affecting members, etc. A control unit **31** makes part of the equipment and this control unit is affected by other signals, here indicated with i**2**. The control of the frames in relation to each other in the directions of the arrows **28** may be accomplished in a way known per se with functions known per se. In the opened position the fax paper **25** can be infed between the frames during its outfeeding from the fax apparatus (cf. **1** in FIG. **1**). In a corresponding way the second paper or the covering paper **24** can be infed between the frames in the transverse direction.

In FIG. **7**. is shown an embodiment in which heat coils **32** may be arranged in either of or both of said frames **26**, **27**. The heat coils are activatable by means of a signal i**3** which forms a contact element in an electric circuit **33** connected to a battery **34** and an earth arrangement **35**, **36**.

FIG. **8** shows applying members **37** for joining means **38** which can be applied spotwise (cf. also the reference symbols **39**, **40**) or stringwise. In this case the applying takes place on the upper side of the fax message (cf. the upper side of the paper **25** of FIG. **6**). The open frames can make such an application possible. In such a case it might be necessary to apply an air suction function to the covering paper **24**. Such an air suction function seeks to maintain the distance between the papers **24**, **25** according to the figure. The air suction function can be considered to be represented by the unit **29**, which affects the air through gaps or recesses at the upper frame **26**.

In FIG. **9** a joining means **41** is applied from a roll **42** which is arranged in an arrangement **43** carrying said roll, and the outfeeding of the roll may occur in an active way, e.g. by means of a motor **44**. Alternatively the front end **41***a* might be pressed down towards the upper side of the fax paper **45**, in the point **41**A. During the continued outfeeding

of the fax paper in the direction of the arrow **46** a joining means **41** is rolled off from the roll **42** which thereby can rotate due to the feeding force of the fax paper **45**. In this case the bottom frame is indicated with **47**. In a preferred embodiment the means **41** can be perforated with through holes **41***b*. As to the extent of the means **41** and the positions of the holes **41***b*, these also have been shown in the FIGS. **5** and **11** (within dashed lines) for the sake of clearness.

In FIG. **10** a fax is indicated with **48** and this fax apparatus might be formed by an apparatus known per se. To this apparatus an additional equipment according to the invention is connected in a way known per se. FIG. **1** is also referred to. In this case the folding function is employed and the fold part **50** can present a relatively sharp lip to give a distinct fold on the enveloped message **51**, which in this case is formed by a folded fax paper. The guiding and the infeeding of the free end **51***a* of the outfed fax paper may occur in a way known per se and with known means. The figure shows a directing member **52**. Furthermore an underlay part **53**, which may be formed by a frame in accordance with the aforesaid, and an upper part **54** are included. The parts **53** and **54** can be arranged so that they can be pressed towards each other (when the folded part **50** has been withdrawn). The controlling of the parts **53** and **54** is symbolised with a control signal i**6**.

FIG. **11** shows the folded fax paper according to FIG. **10**. The lower part of the fax paper is indicated with **55** and the upper part with **56**. As it appears from the figure the part **55** is only partially covered by the part **56**, so that a space **57** is left open for names, addresses, etc.

FIG. **12** shows a punching function which can be used at the additional equipment, for mechanical treatment of the fax paper **57** and the overfolded or overlapped paper part **58**. By means of the punching function which is symbolised by means of a punch **59** and a die **60** holes **61** and flaps **62** can be produced in the paper material **58**, **57**. Thereby, the punching can be executed in such a way that the paper flaps and the holes are threaded together in connection to the mechanical treatment. In the shown case a flap **62** has been arranged so that it extends through the recess **61** and up on the upper side of the material **58**. The punch and the die **59** and **60** may in principle change places. The figure is meant to show only the principle for the interleaving of the flaps and the holes and not the very punching function.

FIG. **13** shows an alternative embodiment of the paper magazine according to FIG. **4**. In this case the covering papers are present on a telefax paper roll **63**. The feeding members **64** are arranged to be possible to control in a way known per se. Furthermore a shearing function is symbolised with **65**. Control signals i**5**–i**9** for the equipments described above symbolise the control functions in question.

FIG. **14** is meant to show the fax paper according to FIG. **11** from above. Here the fax paper is indicated with **66** and edges, with which or through which joining occurs, have been symbolised with **67**, **68** and **69**. The free space for name, address, etc. has been symbolised with **70**. At the fold edge **71** no particular joining means or treatment is needed.

In FIG. **15** a fax paper is indicated with **72** and an overlapping paper or covering paper is indicated with **73**. The flap is indicated with **74** and in the recess for the flap a joining means **75** in the form of glue or the like is arranged. This glue has, in accordance with the aforesaid, been activated in connection to compressing of the papers **72** and **73**. Similar to the aforesaid, joining means can be of the sort that is activated above a pre-determined number of degrees, e.g. 70°–80° C. Thereby the papers behave like normal papers at normal temperature and the joining means doesn't adhere or disturb the function course. At applying the number of degrees in question the glue melts and gets into a joining action for the papers **72**, **73** and the flaps **74**.

As a supplement or alternatively, in accordance with FIG. **16**, a seem **76** can be employed. The applying of the seem is done by means of needle members **77** in a way known per se. An employed thread **78** is received from a thread magazine **79**. Probably this method can be supplemented with joining means **80**. A further alternative is shown in FIG. **17**. Thereby the covering paper part or covering paper **81** and the fax paper **82** have their first sections **83** and **84** respectively subjected to heat which goes above or is within the interval 185° C. or higher. As normal fax paper is presumed to be employed in the fax apparatuses in question crystallisation will occur in the paper material and a hard and brittle edge is formed in connection to said first and second sections. This brittle edge can be interleaved and a certain fusion of the material occurs and the joining can be supplemented with a possible joining means. In the FIGS. **18** and **19** further embodiments of the result of the mechanical treatment function are shown. Thereby flaps **88** and **89** of another kind than the ones described above can be formed. Also the flap according to the FIGS. **18** and **19** can be supplemented by joining means and other mechanical joining methods.

In FIG. **20** the signal relationship between a transmitting fax apparatus **90** and a receiving fax apparatus **91** is shown. In the figure a transferring medium (the telecommunication network) has been symbolised with **92**. Each apparatus respectively is provided with an operation table **93** and **94** respectively and each apparatus respectively is provided with members for said control. Said members have been indicated with **95** and **96** respectively. By means of said operation members and control members **93**, **95** and **94**, **96** respectively information can be introduced in the system as to whether enveloping is required to be present or not. In this way the transmitting apparatus can tell the receiving apparatus that enveloping is to take place.

In the same way the receiving apparatus can tell the transmitting apparatus if enveloping possibilities are present or not. On his receiving apparatus the receiver can also determine whether enveloping is to take place or not. This signalling i**10**, i**11** may occur in a way known per se by means of known means. At the receiving apparatus are shown a number of telefaxes leaving the apparatus. The first fax in the figure has been indicated with **97** and hereby the in **25** formation has been such that enveloping of this first fax is to take place. On the other hand, the second fax **98** in the transmission is not to be enveloped, etc. In FIG. **21** the transmitting apparatus has been indicated with **99** and the receiving one with **100**. The receiving apparatus is formed with adapter circuits **101** for signalling towards the line **102**. Likewise it receives signals from the transmitting apparatus via the adapter unit **101**. In this way information can reach the apparatus **100** from the apparatus **99** or be put in at the apparatus **100** as to whether the additional equipment is to be upconnected or not for the message in question. This information is transferred to a control unit **104** which, in its turn, generates signals to the connecting units **103** in the additional equipment. The connecting units **103** activate and determine the signals i**1**–i**9** according to aforesaid. In

FIG. **22** joining means **107** is used for the sections **105** and **106** respectively.

In the embodiment of FIG. **6** upwards projecting members **27***a* can be employed on the frame **27** and/or the frame **26**.

Said upwards projecting parts or thorns penetrate into the fax paper material and/or into the paper material **24** and produce a perforation that facilitates the removal of the joined edge or the joined edges. In the embodiment of FIG. **9** pre-perforations in the joining means **41** are employed. Said pre-perforations are arranged at certain distances in the lengthwise direction of the material or means and have been indicated with **41***b*. In the case that covering paper is being employed the latter can be provided with joining means **41** and said pre-perforations **41***b*. During enveloping according to the FIGS. **11** and **14** it may be suitable to employ two addresses on the message, one visible, in accordance with FIG. **14** and one which is covered by the overlapping part **56**. This so that the information in question shall remain on the fax when the edge or the envelope is torn off along the joint **69**. As a joining means thermoplastic films of a sort known per se can be employed. Thermoplastic can be activated by means of heat or solvents. The heat activation is in accordance to temperature, time or pressure. The activation method can be formed by a "flat iron principle" or heat pressing accomplished by means of said frames **26**, **27**. There might be referred to 3M thermoplastic film of the type SCOTCH No. 584/588. Corresponding thermoplastic films can be employed. In FIG. **10** the folding of the front page of the fax message takes place over the rear edge of the fax message. Of course arrangements where the rear edge is folded over the front edge can be arranged. In this case it is suitable to provide the front edge with a thermoplastic film if a such one is employed. The method comprises that the telefax message is fed and is folded via the front edge or the rear edge over the rear and front parts respectively of the fax message. The applying of joining means may have taken place at an earlier stage or after the folding when the parts covering each other are located at a distance from each other (cf. with FIG. **10**). After the applying of joining means the compressing of the parts **53** and **54** takes place with the fax message parts positioned inbetween.

EMBODIMENTS ACCORDING TO THE FIGS. **23–34**

In FIG. **23** two frames that are movably arranged towards each other and for instance made of metal are indicated with **201** and **202**. The moving directions of the frames are indicated with the arrows **203** and **204**. Between the frames, during the function stage in question, a fax paper or fax paper part **205** is present or inserted, said fax paper or fax paper part being pasted with a strip on one of the sides thereof, said strip having glue only on one side **206***a* thereof and no glue on the other side **206***b* thereof. The sticking of the strip can occur in a stage before the function stage shown in FIG. **23**. The strip **206** presents one or more through recesses that have been arranged (along the lengthwise direction thereof) and are thus conducting between the sides **206***a* and **206***b*. A fax paper part or a part or paper that is joinable with the fax paper **205** is indicated with **207**. In FIG. **24** the frames **201** and **202** are compressed with the papers **205** and **207** positioned towards each other with the layer **206** in a position between the paper parts **205** and **207**. Said layer has been activated, e.g. by means of heat at a temperature between 130°–180° C. This has meant that glue from the layer side **206***a* has floated out via the recess or recesses **206***c* and has forced its way out over the layer side **206***b*. This, in its turn, means that the glue, paste or corresponding on the side **206***a* also is employed to keep the outer surface **206***b* of the layer **206** and the paper or the paper part **207** together.

The FIGS. **25** and **25***a* show the constitution of the frames **201** and **202** respectively of the FIGS. **23** and **24**. The frame can be made of metal, an alloy or some other heatable material. The heating can be done in the way already indicated. The heating can be turned on when the frames take the position shown in FIG. **24**, and the heating results in the glue or the like being activated or melted and being able to start its adhering function. When the frames once again are separated the glue or the like cools down and is activated.

In FIG. **26** a covering paper **208** corresponding to half the size of the telefax message **209** is shown (cf. the dashed edge **209***a*). Alternatively the covering paper **208** may cover slightly less than half the paper **209**. The latter paper is folded around the line **209***a* which forms a transverse direction on the paper. In this way, the telefax message **209** is folded in its transverse direction. At least at its edges a, b and c the covering paper **208** presents joining means on both sides. In FIG. **26***a* the joining means are indicated with **208***b* and **208***d*.

In the FIGS. **27** and **27***a* metal frames **210** and **211** are employed in accordance with the frames of FIG. **25**. In the shown function courses of the FIGS. **27** and **27***a* the fax message according to FIG. **26** is folded around the line **209***a*. The covering paper **208** is inserted between the folded parts **209***b* and **209***c*. The application between these parts can occur in connection the folding or after the folding. FIG. **27***a* shows the completed folding. When the frames **210** and **211** take the position shown in FIG. **27***a* heat is activated, which means that the glue layers or the like **208***b*, **208***d* (see FIG. **26***a*) are activated. In the embodiment of FIG. **27***a* the frame **210** can present an extra cross bar for the free end of the part **209***b* of the telefax message (cf. with **201***a* in FIG. **25**). The heat activation leads to a sealing occurring along all the edges (the three free edges) on the telefax message. The space **209***d* on or at the free end of the part **209***c* of the telefax message can be employed for said name and address function.

Also in the embodiment of FIG. **28** two frames **212**, **213** are employed. In this case the telefax message is folded into three parts **214***a*, **214***b* and **214***c*. The information classed as secret of the telefax message is located on the sides **214***b*' and **214***c*'. The surface **214***a*' may be left open for the information not being classed as secret. Between the parts **214***a* and **214***b* and **214***b* and **214***c* respectively strips or pieces **215**, **216** and **217**, **218** respectively are arranged. Said pieces are located at the edges of the parts **214***a*, **214***b* and **214***c*. The parts have activatable joining means on both sides thereof. In the embodiment of FIG. **30** the frames **212** and **213** are pressed towards each other with said fax message pages, **214***a*, **214***b* and **214***c* positioned inbetween. Furthermore, the pieces **215**, **216** and **217**, **218** respectively are clamped against their belonging fax message parts. The heat activation leads to the activation of the adhering procedure and the fax message parts are held together in the configuration shown in FIG. **30**.

FIG. **29** shows the feeding function for a fax message according to one of the FIGS. **27**, **27***a* and **28**, **30** respectively. In the case according to FIG. **29** the fax message has been given the symbol **219**. In the telefax apparatus or the additional equipment the fax message can be fed by means of rolls or pulleys, **220**, **221**, **222**, **223**. The fax message is thus fed during rotation of the pair of rolls. At the sides, e.g. in magazines not particularly shown, strips or pieces **224**, **225**, **226**, **227** are feedable in the direction of the arrows **228**. Similar to the pieces described above said pieces have joining means on both sides and in a corresponding way the joining means (glue, paste, etc.) are activatable by means of heat. When said pieces **224–227** are inserted at the edges of

the fax message (cf. FIG. **28**) the pair of rolls **220–223** can be displaced in lengthwise direction or be displaced in their rotation axises in the direction of the arrow **229**. During this displacement the pairs of rolls go free from the telefax papers and the pressing functions of the FIGS. **27***a* and **30** can be effectuated.

In one further embodiment the fax paper **230** co-operates with the paper **231** that has joining means on both sides, similar to the papers described above. When the paper **231** has been infed in the direction of the arrow **232** so that it covers parts of the fax paper **230** or the edge of the fax paper **230** with a thin strip **231***a*, the section **231***a* in question is sheared off by means of a shear apparatus **233**.

It is also possible to have a magazine **234** according to FIG. **32**, which magazine is meant for pre-sheared strips **235** that are fed from the magazine in the direction of the arrow **236**. Such an outfed strip is indicated with **237** and the strip has surfacings on both its sides **237***a* and **237***b*. The horizontal extent of the strip is shown in FIG. **33**. FIG. **34** is a horizontal view showing the folded or enveloped fax message according to the principles of FIG. **28** and FIG. **30**. The upper part **214***a* can be given different, required lengths to increase or decrease the space for information classed as secret of the telefax message, i.e. the information between the sides **214***b* and **214***c* of FIG. **30**. In FIG. **34** the fax message has been given the symbol **238** and its edges, which are fully or partially glued together, have the symbols **238***a*, **238***b* and **238***c*. In accordance with the aforementioned the fax message can be provided with perforations in the indicated way, by means of which perforations the tearing off of the edges that have been glued together is facilitated.

The invention is not limited to the embodiment shown above by way of example but can be modified within the scope of the following claims and the concept of the invention. One, two or more foldings can be combined with the sealing by mechanical means (anchorings) and perforations (of edges).

THE EMBODIMENT ACCORDING TO THE FIGS. 35–51

In accordance with the FIGS. **35**, **36** and **37** the folding function for the fax message is employed at the same time as a joining paper or a joining member which is provided with glue or the like along its edges on both sides is inserted between the folded fax message pages. According to FIG. **35** each fax message **301** is fed down into a folding device **302**. Thereby one or more fax messages can be fed down into the device in a successive order. A joining member **303** is fed down over one of the fax message papers, which is slightly prefolded. The direction of the downfeeding of each fax message respectively is indicated with **304** and the direction of the downfeeding of each joining member respectively is indicated with **309**. The joining members are arranged in a magazine **307**, which in the present case is located above the folding member **302** so that one can use the weight of each message respectively. Therefore there are directing devices **308**, for the directing of each joining member **303**' respectively to the right position. The magazine principle of **307** can be accomplished in a way known per se. As feeding takes place the joining members are moved in the direction of the arrow **310**. Thus, first a fax message **301** can be fed down into the folding device, after which a joining member is fed down on or over the page in question. Thereafter, a second fax message can be fed down over the preceding fax message and over said joining member, after which a new joining member is fed down over one side of the second fax message, etc. In FIG. **36**, from the pre-folded state of FIG. **35**, folding has been completed until a fully folded state exists. In this state the fax message pages are compressed towards each other with the joining member positioned in between. The clamping can be done with a possible adding of heat. In FIG. **37** the two parts **302***a* and **302***b* have been given a separated position in relation to each other, the separated position having the angle α. Thereby the inclination is such that the completely folded, enveloped message can be led away via an outlet opening.

According to FIG. **38** the folding part **302** can consist of a yoke which is heatable by means of heat effectuating members **311**. The power supply is indicated with **312** and control members for the connection of the power supply are indicated with **313**. The connecting lead to the control member **313** is indicated with **314**. A motor **315** is shown in FIG. **38** and the motor is arranged to give the folding parts **302***a* and **302***b* their angled positions in relation to each other, as well as their coordinated angled positions. A member for the control of and power supply to the motor **315** is indicated with **315***a*. FIG. **39** shows punching members **316** and **317**. The message **318** can be displaced in the direction of the arrow **319** as the punching continues. FIG. **40** shows a horizontal view of the folded message including the space **320** for address. The punching part **316** is shown in FIG. **40** and the feeding directions **319** and possible turning directions **320***a* are also shown. Thus, punching can occur along the edges **321**, **322** and **323**. In the system of FIG. **41** known fax apparatuses **324** and **325** are employed. The magazine of FIG. **1** is also shown in FIG. **41** as well as the fax message **301** and the joining member **303**. The positions of the fax papers, parts executing the folding function, punching members, etc. are detectable by means of one or more detectors or sensors **326**, **327**, **328**, etc. The BUS-connection is indicated with **362**.

In FIG. **41** the folding device is schematically implied at **302** and the driving motor of the latter is indicated with **315**. A communication connection between the two fax apparatuses is indicated with **363**. in the case with regular fax apparatuses the connection **363** is formed by the regular telecommunication network. If, on the other hand, the apparatus **324** and **325** are local stations for electronic mail or the like, the connection **363** may be formed by a local data communication network, but also here the connection may be formed by a more extensive data communication network or the very telecommunication network.

In FIG. **41** the symbol **364** indicates a treatment unit (CPU) while **365** and **366** indicate memory units, for instance RAM and ROM.

The fax apparatuses can be of a sort known per se. Each additional equipment respectively is not especially shown in the figure but can be made in a way known per se so that enveloping and other treatment of each fax message respectively takes place inaccessibly from the outside. Key functions and the like can be of a known sort. Each fax apparatus respectively may comprise a key set and a display unit. A transmitting apparatus may comprise a manoeuvring member, e.g. the key **329**, by means of which information is transmitted into the apparatus **324** as to whether enveloping shall be able to take place. The apparatus **324** shall in its turn be able to tell the apparatus **325** that it can receive and envelop the required message. In accordance to signalling received from the apparatus **325** concerning the wish to envelop the apparatus **324** shall also affect the control unit and initiate and carry through the enveloping. In present cases the signal exchange or the protocol are accomplished according to standards (CCITT; 609). As to employed fax

protocol within CCITT for the signalling is referred to G3 (and possibly G2) under the fax protocols for use in the context. It is possible to introduce signal outside the protocol. The exchange can be accomplished with Baud-numbers permitted by the connection and determined by the protocol (e.g. **1200, 2400** etc. Baud). With the key set **330** the user of the fax apparatus **324** can program his requests as to the enveloping function. The apparatus **324** also can be provided with an activation key, e.g. **331**, with which there are possibilities to engage and disengage the enveloping. The signal exchange can be supplemented with show of information on the display unit **332**. The possible control and microcomputer circuits of the fax apparatus itself can be employed. In the present case employment of a separate control unit is suggested, which separate unit can be built into and integrated with the rest of the function of the fax apparatus. Thereby the enveloping possibility can be sold and marketed as additional equipment or as a part integrated in a fax apparatus.

The parts included in the control unit can be arranged in accordance with FIG. **42**, in which the control unit has the symbol **333**. The control unit comprises a microcomputer CPU **364** with belonging memory members RAM and ROM **365** and **366** respectively. Furthermore, memory space **367** can be comprised in or outside said memory members for mutual movements between the members in question which are accomplishing or executing the enveloping function. Furthermore, spaces **368** for common movement functions can be comprised in said accomplishing or executing members. In those cases when heat is employed in connection to the sealing an on-off-function **369** may be arranged. Also punching and/or pressing functions **370** can be arranged in memory spaces. Co-ordinated movements **371** as to lengthwise displacements of the parts involved, the fax message or the fax messages, etc., can be comprised in the memory spaces. In the case when two or more fax messages are to be involved in the enveloping function where each fax message respectively is comprised in the sealing, memory members **372** can be arranged for this. The control unit comprises a power supply connection **373**. Also adapter units **374** for the sensors **S1, S2, S3 . . . S12** are comprised.

Further, adapter members **375** for members executing operation as well as members **376** executing movements and functions are comprised. The microcomputer accomplishes control functions i**1**, i**2**, . . . i**6** for the different members executing functions and operations, in accordance with detecting functions i**7** from said sensors. Furthermore, control and detecting information i**8** is obtained from the control and/or fax apparatus adapter unit **334**. The calculation circuits of the microcomputer can operate with known programs for control and detection of members executing function courses and sensors respectively and detection of control signals from the tele coummunication system and/or the fax apparatus. Of course, unique calculation functions may be comprised in the operation of the microcomputer CPU **364**. Exchange of signal information between the microcomputer CPU and the possible microcomputer of the fax **324** may also occur. The signal exchange of the microcomputer is indicated with i**9**. The signal exchanges to the different memory function units are indicated with i**10**, i**11** . . . i**17**. The BUS-connection **362** can be comprised by a connection with two or more threads. Thereby, communication protocols are present between the adapter circuits and the members executing function courses. In one or more points executing or carrying out functions another microcomputer may be arranged, the micro computer forming a slave unit to the microcomputer **364** and/or the microcomputer of the fax **324**. Thereby, the microcomputer at the executing point can be provided with a known program for the function execution in question, and thereby receives only one superior control information, program feeding, etc. from the master microcomputer. It is referred to the embodiments according to the enclosed patent claims.

In one embodiment the fax message has the shape of a continuous paper web, which, in itself, comprises several fax messages (compare with FIG. **43**). The paper web is folded successively or generally simultaneously in the transverse directions, preferably in the beginning and at the end of each fax message respectively. Thus, the paper web **335** comprises individual fax messages **336, 337 . . . 341**. The folding is also done on the address space **342** and exists on the lowermost fax message **341** or the last fax message **336** from the apparatus. At each folding location respectively folding effectuating or paper web treating members **343** are arranged. Sensors **381** according to the aforesaid are connected at their folding or treatment point. A paper web folded in this way can be sheared by a receiver by means of a scissors or cutting function along shearable edges **344**. In FIG. **45** pressing and/or punching members **345** are shown and are compressing the paper web **335**. A feeding direction for the paper web in FIG. **43** is indicated with **346**. The joining function of FIG. **45** can occur in accordance with what has previously been described. The folding function and the joining function can also be supplemented by joining members **347–350** according to FIG. **46**. Here, the punching and/or pressing members have the symbol **351, 352**. According to FIG. **47** the paper web can successively be sheared off into paper web parts (fax messages) **353, 354** and **355**. Joining members **357**, according to the aforesaid, are arranged between the fax messages. For instance, said joining members have glue surfacings on both sides along their edges. According to FIG. **48** first, second and third fax messages can be pre-folded and joining members can be laid over the fax messages thus having been pre-folded, the fax messages thereafter being folded one at a time. According to FIG. **49** a transmitting fax apparatuses **377** is provided with affecting members **378** to tell whether enveloping is to take place or not. Furthermore, affecting members **378** to tell about the No. of fax messages are comprised. In accordance with the affections of the affecting members signals i**19** are received by the first fax apparatus **360** via the communication system **379**. In the case when enveloping is to take place, the apparatus generates initiating signals i**20** to the microcomputer CPU **380**. Alternatively the information as to whether enveloping is to take place or not can be determined from the first fax apparatus by means of affecting members **358** thereon. Thereby, said initiating information i**20** is generated in a corresponding way. In accordance with the received information CPU generates affecting signals i**21** to a paper web **359** which starts from a unit **361** that affects the fax **360**. Cf. FIG. **43**. In FIG. **48** folding can take place simultaneously by employing further joining members HF between the second paper halves or corresponding sheet parts. The folding of a paper web can lead to a standardised No. of sides in the envelope, which sides can be employed or not. In FIG. **50** for instance, four sheets of paper on which the text sides are indicated with **382** are comprised. The uppermost and lowermost text sides are turned inwards and the lowermost side **383** has a projecting part **383***a* for addresses and information. Thereby, the standardising can be added with odd numbers of foldings, said foldings being one or more. Joining means or members are indicated with **384**. The backsides of the web, i.e. those lacking text, are indicated with **385**. In the embodiment of FIG. **51** the

lowermost text side **386** is turned outwards and is employed as an address and information side while the remaining text sides **387** are turned inwards. The joining members are indicated with **388**. In this case the No. of foldings is even. The standardising can be based on two or more even foldings.

THE EMBODIMENT ACCORDING TO THE FIGS. **52–68**

FIG. **52**

401. Infeeding a document
402. Outfeeding an unaffected document.
403. Outfeeding a sealed document.
404. Optical sensor.
405. Optical sensor, movable in the plane of the document.
406. Optical sensor, movable in the plane of the document.
407. Driving roll with friction lining, e.g. rubber.
408. Driving roll with friction lining, e.g. in sections.
409. Driving roll with friction lining.
410. Driving roll with friction lining.
411. 5 pressure rolls.
412. Compression spring pressing **411** against **407**, **408**, **409** and **410**.
413. Folding knife
414. 2 traction springs, one at each end of **413**.
415. Punch and knife holder.
416. 9 punches, thickness of -3 millimetres and width of -5 millimetres.
417. 9 knives, thickness ≈0,5 and width ≈4 millimetres.
418. Stripper
419. Spring that presses the stripper downwards towards interceptors, in a known way for pressing tools.
420. Die, here shown in section C—C in FIG. **53**.
421. 2 crank disks.
422. 2 crank shafts.
423. 3 inserters, positioned right below the punch rows.
424. 3 traction magnets.

FIG. **53**

425. Electric motor with gear box.
426. Driving belt.
427. Gear wheel.
428. Driving belt.
429. Gear wheel.
430. Electric motor with gear box.
431. Driving belt.
432. Traction magnet.
433. Yoke.
434. Ball bearings fixed on **433**.
435. 4 guide pins, fixed in **420** and running accurately in holes in **415**.
436. 9 openings for a punch **416**.
437. 9 openings for a knife **417**.
418. Cutting surfaces together with a punch **416**.

FIG. **54**

Showing the folding knife **413** according to view A, FIG. **52**.
439. Recesses so that the folding knife **413** can be brought down beyond the contact line between the driving roll **408** and the pressing roll **411** thereof (FIG. **53**) without touching the sections of friction material of the driving roll **408**.
440. Stop for **413**.
441. Stop for yoke **433**. (FIG. **53**).

FIG. **55**

Showing knife **417** according to view B, FIG. **52**.
442. Opening in the knife **417**, wider than the punch **416**.
443. Lip.

FIG. **56**

Showing the stripper **418** according to the view D, FIG. **4**.
444. Opening for the knife **417** ≈1 millimetre wider than the thickness of **417**.
445. Opening for the punch **416**.

FIG. **57**

Showing how the folding knife **413** has brought the document **446** down between the friction surfaces of the driving roll **408** and the pressing roll **411**.
417. Relinking rail.

FIG. **58**

Showing an unsealed document with bar code **448**.

FIG. **59**

Showing how the crank discs **421** have brought down the punches **416** and the knives **417** into the die **420** by means of the crankshafts **422** and have penetrated through the folded document **446**.

FIG. **60**

Showing an enlargement of a punch/knife unit in FIG. **59**.
449. is a document flap which has been cut loose by the punch **416**.

FIG. **61**

Showing how inserters **423** have inserted the flaps **449** through the opening **442** (FIG. **55**) in the knife **417**.

FIG. **62**

Showing punches and knives on their way up, in a state where strippers **418** are to leave the document and the flaps **449** are positioned in a loose way against the lower edge of the opening **442** in the knife **417**.

FIG. **63**

Showing the upper part of the sealing device in a fully open position.

FIG. **64**

Showing a threaded pair of flaps in enlargement.

FIG. **65**

Showing the first page in a transmission.

FIG. **66**

Showing the following pages.

FIG. **67**

Showing a “fax letter”.
451. Stamp.
450. “Dry glue”. Glue in micro balloons, that burst at a suitable pressure.

Function

The document is inserted at **401**. When the document passes an optosensor **404** the motor **425** starts and drives the driving rolls **407**, **408**, **409** and **410** via the belt **426**, gear wheels **427**, belt **428** and gear wheels **429**. The driving roll **407** brings the document to the optosensor **405**, and, if this one is put out of function, e.g. by means of a switch which is positioned on the apparatus and accessible from the outside, or via a bar code or in any other way, the document is brought out at **402** by means of a driving roll **410**.

If a sealed document is requested, the optosensor **405** activates traction magnets **432**, which via the yoke **433** presses the ball bearings **434** towards the folding knife **413**, so that this one, in its turn, is pressed towards the driving roll **407** and is brought down by the friction forces so that the document is folded according to FIG. **57**. Further sensors can be positioned after **405**, so that the sensor **405** folds the document in accordance with FIG. **65** and the next sensor folds the doucment in accordance with FIG. **66**.

Another way of determining where the document is to be folded is to provide the latter with a code, e.g. a bar code (FIG. **58**). In the first place, by being present or not, the code indicates if the document is to be folded, in the second place where it is to be folded. If sensors are placed at both sides

of the document, the latter can come with turned ends and yet be sealed correctly. After the folding, the document is forwarded, gets further help by the driving roll **108** and is linked **900** by means of a rail **447**, is brought in through the sealing part all the way to a sensor **406**, which stops the motor **425** and starts the motor **430**, which, via the driving belt **431**, turns the crank disks **421** to a position according to FIG. **59**. The outcutting of the flap (flaps) has now been done according to the figure description and at further turning of the crank disks **421** the contraction magnet **424** is activated, so that the inserters **423** insert the flaps **449** through the knife **417** according to FIG. **61**. At the upward movement of the knives, the flaps **449** are brought double folded through the slots in the document, said slots being made by the knives **417**, and then they are brought on through the openings **444** of the stripper **418**, to run out from the openings **442** of the knives **417** at a position according to FIG. **62**. At a further upward movement the stripper **418** leaves the document and the motor **430** stops when the crank discs have moved 360°. The traction magnets **424** goes back to an initial position together with the inserters **423** by means of springs (not shown). The motor **425** starts and brings in the document between the pair of rolls **409** and **411**, where the flaps **449** are pressed down, the document being sent out at **403**, and when the rear end passes the sensor **406** the motor **425** is switched off.

Another way of sealing is shown in FIG. **67**. When using "fax letters" these may perhaps not accept the flap sealing. In such a case the document can be provided with "dry" glue, said glue gluing the document together during passing of the pair of rolls **409** and **411**. The sensor **406** is then put out of function, e.g. during charging of the fax apparatus with glue preparated papers, or with a code according to FIG. **58**, which also can make the fax apparatus choose preparated papers from a particular magazine.

FIG. **68** shows a constructive design of an enveloping apparatus **417** according to the invention, said apparatus being possible to connect and lock to a fax equipment known per se and being sold on the common market. Hereby it can be referred to the apparatus "RICHO 3 000" which is sold by Enström/Carl Lamm. The rear end B is applied to the paper feeding recesses on the known fax or the fax in question. The equipment A shows or may show a length of 35–50 centimetres and a height of for instance 10–20 centimetres. At the front end C cavities are arranged for enveloped documents/printout media D. From a second cavity unenveloped documents/outprint media F or such media enveloped in an alternative way (see above) can be provided. The width G may have values between 25–40 centimetres. Affecting members P have been arranged for the choice of enveloping, non-enveloping, positions for the folding, etc. The apparatus presents a generally rectangular part, a bottom part A' and an upper part arranged with the latter. The upper part comprises a central part A" and sections A'" and A"" projecting from said central part, said sections extending forward and backward respectively. The rear surface of the central part and the lower surface of the section A"" are connected to the known fax apparatus. The front section A"' inclines slightly forward/downward towards the user and the feeding cavities are slightly inclined in relation to the vertical plane directed towards the user.

THE EMBODIMENT ACCORDING TO FIGS. **69–71**

This embodiment refers to an alternative to the folding device described in the embodiment according to FIGS. **52–68**. In FIG. **69**, at **501**, is indicated how the document in question **546** is meant to come in. As previously, a sensor **504** detects when the document arrives. Feeding members **507** and **507***a* are in engagement with the document web and feeds it forward in the device. These feeding members comprise a driving roll **507**, in particular with a friction lining, for instance rubber, and a pressing roll **507***a*, which is pressed towards the driving roll **507**. The document web is received between these rolls. One further sensor **505** detects the front edge of the document. Members **514** lifting the document web are arranged to lift the document so that it passes over the driving roll **508** without getting in contact with its periphery, which suitably is provided with friction lining. The web lifting members **514** has the character of arms that are tiltably mounted around a shaft **514***a* and that are received in grooves in the roll **508** in a way shown in FIG. **70**.

The driving rolls **507** and **508** are driven in opposite directions and located so that they form a nip between each other, in which nip rolling surfaces which are immediately adjacent are moving downwards. Above this nip a guiding member **513** is arranged, said guiding member having the character of a rail arranged to guide the document arriving from the rolls **507**, **507***a* over the web lifting members **514**.

Another roll **511** is co-operating with the driving roll **508**. This one has the character of a pressing roll and is rotatably mounted in a yoke **533**, which is possible to affect with a force member **532**, for instance a pressure magnet, so that the pressing roll **511** is pressed downwards against the driving roll **508**. The pressing roll **511** is arranged in the area above the web lifting members **514**. When the pressing roll **511** is pressed downwards it first reaches the web lifting members **514** and presses these ones downwards into the grooves in the driving roll **508**, so that the document web, which is present between the driving roll and the pressing roll, will be pressed until contact with driving roll **508** is obtained.

In the area below the nip between the driving rolls **507** and **508** the guiding member **547** is arranged, said member having as its task to guide a folded document coming out from the nip between the driving rolls **507** and **508** in a direction towards a unit Z for sealing the document sections folded against each other in relation to each other. This unit has been described in detail in the previous embodiment and here it won't be further treated. It shall only be noted that the folded document can be meant to be driven on in this unit by means of a driving nip formed between the driving roll **508** and another pressing roll **508***a*. As in the previous embodiment, unfolded documents are meant to be able to pass through the device and leave the same at the arrow **502**. On the other hand, documents that are folded and sealed in the unit Z leave the device at **503**.

The driving rolls **507** and **508** are driven as in the previous embodiment, by means of a motor **525** and transmission members **526**, **527**, e. g in the form of belts/gear wheels or the like.

The device operates in the following way: When documents arriving at **501** not are to be folded the pressing roll **511** is retracted and the web lifting members **514** are elevated so that the document web arriving between the rolls **507** and **507***a* and driven by the roll **507** moves above the web lifting members and below the guiding member **513**, to finally leave the device at **502**, for instance after having passed through the driving nip between the rolls **410** and **411**, as in the previous embodiment.

When, on the other and, an arriving document is to be folded, the sensor **505** indicate when the front edges of the

document has reached said sensor, and thereby the pressing roll **511** is activated so that it presses down the document web to contacting against the mantle surface of the roll **508**. As a consequence of the rotation directions of the driving rolls **507** and **508**, indicated in FIG. **69** and **71**, this will give rise to that the document, in a folded state, will be driven downwards through the nip between the rolls, with the fold of the document located at the bottom, as indicated in FIG. **71**. Thereby the fold of the document comes in between the guiding member **547** and the driving roll **508** and is linked on into the nip between the latter and the additional pressing roll **508***a* and then goes into the sealing unit Z. After that, the sealed and double folded document leaves the device at **503** after having passed through a driving nip formed by a driving roll and an additional pressing roll co-operating with the latter.

Of course, the devices and methods described can be modified in a number of ways within the scope of the concept of the invention brought to expression in the following patent claims.

In all the described embodiments the general feature of the invention is that the sealed, outprinted telemessage has its text bearing areas sealed all around. On the basis of for instance FIG. **14** this can be clarified to that point that the sealed telemessage **66** illustrated therein has four sealings **67**, **68**, **69** an **71**, two of which **67**, **68** extend along opposite edges while another one **69** is transversely directed in relation to the sealings **67**, **68** located at the edges. In the example, the sealing **69** is designed to leave the information space **70** free and extends generally parallel with the latter. In the example, the remaining sealing **71** is formed by a folding but could also be comprised of a sealing between two separate sheets of paper.

I claim:

1. An enveloping device for equipment which receives telemessages, said equipment arranged to print out said telemessages on a printout medium with a printout device said enveloping device being connected to said printout device and being arranged to use at least a part of said printout medium in the enveloping enclosure and to seal said printout medium along at least one edge, said enveloping device comprising:

punching members and flap affecting members arranged along three edges of said printout medium, wherein said printout medium is fed to said punching members and said flap affecting members, wherein each punching member comprises a first punching member arranged to make flaps during its function and a second punching member arranged to make an adjacent recess, arranged by the side of a belonging recess centered with the flap during the function of said first punching member, said flap having a connection to the printout medium, said flap affecting members are arranged to take each outpunched flap respectively, into the adjacent recess, so that the flaps are received into the adjacent recess via the bottom side of the printout medium, so that each flap respectively extends from the bottom side of the printout medium at the belonging recess thereof, to the upper side of the printout medium at the adjacent recess.

2. A device according to claim **1**, wherein the flap affecting members comprise flap inserters inserting said flap in a recess in punching members effectuating the adjacent recess, and, after the insertion of the flap into the punch recess, the respective flap is pulled up by said punching member and stripping is done by means of a stripper.

3. A device according to claim **2**, wherein said flap inserters for all the punching members are affectable by means of a traction magnet.

4. A device according to claim **2**, wherein punching members are arranged in first and second holders arranged to be affectable in a direction away from and towards each other in accordance with controls, the punching and flap affecting functions being coordinated with the movements of the holders, so that punching and flap affection are effectuatable during the movements of the holders towards each other.

5. A device according to claim **4**, wherein the holders are operable by means of an eccentric function accomplishing the movements of the holders, said movements being directed towards and away from each other.

6. An enveloping device for equipment which receives telemessages, said equipment arranged to print out said telemessages on a printout medium with a printout device, said enveloping device being connected to said printout device and being arranged to use at least a part of said printout medium in the enveloping enclosure and to seal said printout medium along at least one edge, said enveloping device comprising:

means for effectuating sealing of said printout medium cooperating with a feeding arrangement, said feeding arrangement comprising:

a first driving roll included in the feeding members, said first driving roll receiving the printout medium between itself and a second driving roll;

means for lifting said printout medium and, in a first position, leading said printout medium past a third driving roll without folding, said third driving roll being driven in the opposite direction in relation to said first driving roll; and

a fourth driving roll, arranged to receive the printout medium between itself and web lifting members and capable of pressing down the means for lifting, said means for lifting being flexibly arranged, so that said printout medium is pressed towards said third driving roll, whereby the document will be folded and will pass down between the driving rolls with its fold first.

7. A system for transmission of electronic mail, said system comprising a first office supplying said mail and a second office receiving said mail, said second office having enveloping equipment for receiving said mail, said equipment arranged to print out said electronic mail on a printout medium with a printout device, said enveloping device being connected to said printout device and being arranged to use at least a part of said printout medium in an enveloping enclosure and to seal said printout medium along at least one edge, said enveloping device comprising:

punching members and flap affecting members arranged along three edges of said printout medium, wherein said printout medium is fed to said punching members and said flap affecting members, wherein each punching member comprises a first punching member arranged to make flaps during its function and a second punching member arranged to make an adjacent recess arranged by the side of a first recess created with the flap during the function of said first punching member, said flap having a connection to the printout medium, said flap affecting members being arranged to take each outpunched flap, respectively, into the adjacent recess, so that the flaps are received into the adjacent recess via the bottom side of the printout medium, whereby each flap, respectively extends from the bottom side of the printout medium at the first recess thereof, to the upper side of the printout medium at the adjacent recess.

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